

CRPL-F 200 PART A

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PART A
IONOSPHERIC DATA

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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

IONOSPHERIC DATA

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SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, and continuing through December 1956, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1957, the symbols used are given in NBS Report 5033, "Summary of Changes in Ionospheric Vertical Soundings, Observing and Scaling Procedures - Effective 1 January 1957," which draws upon the First Report of the Special Committee on World-Wide Ionospheric Soundings (URSI/AGI), Brussels, Sept. 2, 1956. A list of these symbols is available upon request.

In the Second Report of the Special Committee on World-Wide Ionospheric Soundings of the URSI/AGI Committee, May 1957, a new descriptive letter was introduced:

- M Measurement questionable because the ordinary and extraordinary components are not distinguishable.

There was an expansion in meaning of the following:

- Z (1) (qualifying letter) Measurement deduced from the third magnetoionic component.
- (2) (descriptive letter) Third magnetoionic component present.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given above.

- a. For all ionospheric characteristics:

Values missing because of A, C, F, H, L, N or R are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of f_oF_2 (and f_oE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of $h'F$ (and $h'E$ near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For f_oF_2 , as equal to or less than f_oF_1 .
2. For $h'F_2$, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the descriptive symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G are counted as equal to or less than the median f_oE , or equal to or less than the lower frequency limit of the recorder.

B for fEs is counted on the low side when there is a numerical value of a higher layer characteristic; otherwise it is omitted from the median count.

S for fEs is counted on the low side at night; during the day it is omitted from the median count (beginning with data for November 1957).

Values of fEs missing for any other reason, and values of $h'Es$ missing for any reason at all are omitted from the median count.

Beginning with CRPL-F188, Part A, issued April 1960, the count is given for f_oF_2 in the tables of medians. It is regretted that space limitations prevent including detailed counts for other characteristics.

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 72 and figures 1 to 144 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Republica Argentina, Ministerio de Marina:

Buenos Aires, Argentina
Decepcion I.
Trelew, Argentina

Commonwealth of Australia, Ionospheric Prediction Service of the Commonwealth Observatory:

Brisbane, Australia
Canberra, Australia
Mawson
Townsville, Australia
Wilkes Station, Antarctica

University of Graz:

Graz, Austria

Escola Politecnica, University of Sao Paulo:

Sao Paulo, Brazil

British Department of Scientific and Industrial Research, Radio Research Board:

Ibadan, Nigeria (University College of Ibadan)
Inverness, Scotland
Port Lockroy
Singapore, British Malaya

Defence Research Board, Canada:

Churchill, Canada
Ottawa, Canada
Resolute Bay, Canada
St. John's, Newfoundland
Winnipeg, Canada

General Direction of Posts and Telegraphs, Helsinki, Finland:

Nurmijarvi, Finland

The Finnish Academy of Sciences and Letters:

Sodankyla, Finland

French National Center for Telecommunications Studies:

Bangui, French Equatorial Africa
 Dakar, French West Africa
 Djibouti, French Somaliland
 Poitiers, France
 Rabat, Morocco
 Tahiti, Society Is.
 Tananarive, Madagascar

Institute for Ionospheric Research, Lindau Uber Northeim, Hannover, Germany:

Lindau/Harz, Germany
 Tsumeb, South West Africa

Ionospheric Institute, Breisach, Germany:
 Freiburg, Germany

The Royal Netherlands Meteorological Institute:

De Bilt, Holland
 Hollandia, Netherlands New Guinea
 Paramaribo, Surinam

National Institute of Geophysics, City University, Rome, Italy:
 Rome, Italy

Ministry of Postal Services, Radio Research Laboratories, Tokyo, Japan:

Akita, Japan
 Tokyo (Kokubunji), Japan
 Wakkanai, Japan
 Yamagawa, Japan

General Directorate of Telecommunications, Mexico:
 El Cerillo, Mexico

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
 Tromso, Norway

South African Council for Scientific and Industrial Research:
 Capetown, Union of South Africa
 Johannesburg, Union of South Africa

Research Institute of National Defence, Stockholm, Sweden:
 Kiruna, Sweden
 Lycksele, Sweden
 Upsala, Sweden

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
 Lulea, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Sottens, Switzerland

National Bureau of Standards (Central Radio Propagation Laboratory):
Byrd Station, Antarctica
Huancayo, Peru (Instituto Geofisico de Huancayo)
Talara, Peru (Instituto Geofisico de Huancayo)

TABULATIONS OF ELECTRON DENSITY DATA

Reduction of hourly ionospheric vertical soundings to electron density profiles has become a part of the systematic ionospheric data program of the Central Radio Propagation Laboratory, National Bureau of Standards. Scalings of ionograms for this purpose are being provided by ionosphere stations operated by several stations associated with CRPL. For the present, the hourly profile data from one CRPL station, Puerto Rico, are appearing in the monthly CRPL-F Reports, Part A. The very considerable task of scaling the ionograms for this purpose is being undertaken by T. R. Gilliland, Engineer in Charge, Puerto Rico Ionosphere Sounding Station; the computations are performed at the NBS Boulder Laboratories by a group headed by J. W. Wright. Basic conversion of virtual to true heights uses the well-known matrix method developed by K. G. Budden of the Cavendish Laboratory, Cambridge University, programmed by Dr. H. H. Howe for a CDC-1604 computer.

The tabulations provide the following basic electron density profile data for each hour of each day of the month:

<u>Quantity</u>	<u>Units</u>	<u>Remarks</u>
Electron Density (N)	$\times 10^3 = \text{electrons/cm}^3$	Body of table; given at each 10 km of height.
NMAX	$\times 10^3 = \text{electrons/cm}^3$	Always the highest value of N at each hour. To maintain this rule, the electron density at the next 10 km increment above HMAX is always given as exactly equal to NMAX (unless HMAX coincides with a 10 km level).
QUALification	(Alphabetic)	A standard scaling letter qualifying the observation when necessary.
KP		The standard Kp magnetic index, to one digit.
HMIN	Kilometers	The height of zero or very low electron density, obtained by linear extrapolation of the electron density vs. height curve.
SCAT	Kilometers	One half of the half-thickness of the parabola best fitting the upper portion of the F region profile. Approximates the scale height near the level HMAX.
HMAX	Kilometers	The height of maximum electron density, determined by fitting a parabola to the upper portion of the profile.
SHMAX	$\times 10^{10} = \text{electrons/cm}^2$ column.	Obtained by integration of the profile between the limits HMIN and HMAX.

Tabulations of the average electron densities each hour, at each 10 km level, for the quiet ionosphere, are also given. These averages include the profiles obtained when the magnetic character figure Kp is 4+ or less. The number of profiles entering the average for each hour is given by CNT. The other parameters of the layer, HMIN, SCAT, HMAX, SHMAX, and the mean value of Kp are given for each hour.

Before the averaging process, the individual profiles are extrapolated above HMAX by a Chapman distribution of 100 km scale height. This assumed model seems to agree well with the few published measurements dealing with the topside profile of the F-region.* Extrapolation is necessary in order to calculate homogeneous averages near HMAX and the average profiles are, in fact, given up to 950 km. Also given are the average estimated integrated electron densities to infinity, SHINF (same units as SHMAX); this is an approximation to the total electron content in a column of the ionosphere.

*See Wright, J. W. "A Model of the F-Region Above HMAX F2" J.Geophys.Res. V.65, pp.185-191.

ELECTRON DENSITY

RAMEY AFB. PUERTO RICO 60 W 1 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _{KP}			2	A2				3		3	A3	3
HMIN	107	106	104		A2	A2	A3	199	199	244	238	229
SCAT	59.4	50.7	52.3					42.4	60.9	52.7	41.8	32.1
HMAXF	298	284	296					288	333	346	317	305
HMAX	1703	1363	1501					528	379	296	207	176
KM												
350										432		
340									446	430		
330									446	422		
320									441	404		
310									381	430		
300	1876		1727						413	350	367	389
290	1868	1669	1721					960	391	307	342	369
280	1834	1666	1686					951	362	252	309	332
270	1772	1636	1614					915	325	191	260	276
260	1699	1574	1522					854	285	121	198	206
250	1592	1476	1389					759	241	59.8	117	125
240	1426	1349	1235					620	197		47.0	67.2
230	1227	1180	1095					454	152			12.4
220	1013	996	917					270	108			
210	827	790	740					120	64.2			
200	648	616	594					12.4	12.4			
190	514	486	474									
180	422	405	393									
170	355	346	326									
160	305	297	270									
150	266	256	218									
140	235	244	185									
130	208	187	164									
120	176	171	154									
110	146	146	145									

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 2 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q+K P	1	A1	A3	A3	A3	A4	4	A4	4	4	4	3
HMIN	106				107		200	200	219	228	241	231
SCAT	52.4				51.2		52.4	47.1	54.4	41.5	38.3	44.5
HMAXF	289				291		307	284	327	321	330	321
SHMAX	1514				1262		1067	515	385	292	248	263
KM												
340											454	
330									540	508	454	446
320									538	508	446	446
310							1555		527	499	421	446
300					1555		1548		507	475	383	421
290	1786				1555		1514	875	481	438	330	393
280	1772				1537		1451	873	443	383	268	353
270	1726				1489		1357	856	389	314	201	293
260	1644				1407		1240	816	327	243	125	222
250	1593				1305		1091	761	252	161	63.6	156
240	1390				1169		890	682	174	80.8		78.6
230	1225				1027		641	575	98.2	22.3		
220	1022				878		399	429	12.4			
210	842				710		179	222				
200	679				539		12.4	12.4				
190	538				392							
180	26				284							
170	353				216							
160	300				172							
150	258				136							
140	222				116							
130	191				108							
120	171				102							
110	139				90.8							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 3 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _{KP}	3	3	3	3	3	3	3	3	3	3	A3	A2
HMIN	222	228	240	209	227	249	239	209	106	108		
SCAT	40.0	50.1	44.4	39.3	53.4	43.3	40.6	43.4	40.2	49.2		
HMAXF	316	324	331	287	333	336	320	277	244	276		
SHMAX	218	204	189	138	143	129	165	465	695	1151		
KM												
340			310		198	219						
330		310	310		198	218						
320	389	310	305		196	211	310					
310	387	304	292		189	199	306					
300	373	292	270		180	180	292					
290	347	274	243	262	166	157	269					
280	310	251	206	260	149	128	238	960		1500		
270	258	220	164	250	129	92.8	190	954		1496		
260	197	181	121	231	107	61.7	127	924		1463		
250	140	133	74.3	206	82.7	12.4	66.8	875	1240	1394		
240	84.5	84.3		168	58.6		12.4	785	1237	1304		
230	45.8	24.6		122	20.3			624	1204	1177		
220				74.0				284	1132	1017		
210				12.4				41.5	1023	837		
200								837	656			
190								529	506			
180								297	394			
170								199	302			
160								157	236			
150								130	188			
140								109	155			
130								94.9	131			
120								87.8	117			
110								73.7	81.2			

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 3 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _{KP}	A2	2	A3	3	3	A5	A5	A5	A6	6	6	6
HMIN	109	109	109	108		199	199	238	215	238	239	
SCAT	50.3	66.8	51.8	68.8		47.7	52.6	43.9	48.9	55.4	47.2	
HMAXF	289	313	297	320		306	303	322	330	374	346	
SHMAX	1448	1698	1506	1777		1043	787	446	433	457	393	
KM												
380											573	
370											573	
360											564	
350											546	599
340											518	597
330					1756				794	643	483	582
320			1654		1756				793	637	437	552
310			1653		1746				1640	1215	778	617
300			1659	1846	1717				1634	1214	741	584
290	1741	1605	1837	1670					1595	1196	685	539
280	1726	1553	1796	1606					1520	1155	605	477
270	1677	1483	1715	1533					1422	1096	495	402
260	1585	1397	1611	1422					1264	1009	351	317
250	1468	1286	1464	1289					1069	885	178	226
240	1323	1173	1288	1125					823	711	34.9	140
230	1132	1068	1062	968					548	459		74.9
220	947	890	843	807					299	229		34.0
210	767	739	649	657					124	97.2		
200	620	604	497	524					12.4	12.4		
190	502	488	394	410								
180	415	392	324	319								
170	353	321	272	249								
160	306	268	230	195								
150	265	226	196	157								
140	225	187	166	130								
130	185	161	142	111								
120	167	150	133	104								
110	62.8	55.6	62.8	97.2								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 4 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _{KP}	6	6	6	6	6	5	5	5	5	5	5	5
HMIN	260	259	279	248	244	220	209	199	110	109	108	109
SCAT	47.7	38.6	40.9	51.2	54.9	65.3	36.2	40.5	44.5	50.2	40.0	44.4
HMAXF	364	343	414	343	358	354	281	298	276	295	272	289
SHMAX	360	340	436	383	355	446	117	352	950	1372	1547	1619
KM												
420			508									
410			507									
400			501									
390			487									
380			466									
370	540		430									
360	539		405		469	500						
350	529	643	367	599	467	500						
340	506	642	324	599	456	495						
330	472	623	278	590	437	484						
320	426	582	226	570	412	467						
310	371	522	174	543	379	448						
300	309	438	122	499	330	418						
290	241	337	73.2	432	295	380	240	608				
280	170	228	12.4	350	245	337	240	577	1341	1629	2430	2137
270	92.8	110		252	189	291	234	533	1335	1562	2429	2058
260				122	130	245	219	473	1297	1461	2374	1923
250				32.2	59.2	200	196	400	1223	1328	2238	1736
240							151	162	317	1124	1156	2037
230							95.1	119	220	974	987	1747
220							12.4	70.3	128	791	803	1404
210							12.4	66.7	627	643	1052	751
200								498	514	713	591	
190								389	419	490	480	
180								298	344	368	404	
170								217	276	299	343	
160								151	220	250	290	
150								122	182	213	248	
140								102	159	183	212	
130								91.5	139	160	182	
120								82.5	127	148	166	
110									49.0	75.6	55.6	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 4 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _{KP}	5	A5	4	4	A4	A5	A5	5	4	A4	4	4
HMIN	105	108	109	106	109		210	199	199	239	231	199
SCAT	46.4	55.5	58.5	63.6	50.4		41.0	50.0	35.4	49.6	44.5	45.1
HMAXF	295	309	317	316	306		292	300	276	354	323	302
SHMAX	1622	1947	2151	2128	1683		886	824	379	426	354	301
KM												
360											608	
350											607	
340											595	
330											571	599
320				2260	2128						535	598
310			2144	2251	2123	2032		1290			487	587
300	1953	2130	2210	2093	2024		1669	1290			427	559
290	1947	2080	2133	2037	1980		1668	1277			357	519
280	1898	1989	2034	1952	1899		1615	1238			288	455
270	1795	1868	1890	1846	1763		1552	1171	794		218	382
260	1663	1718	1720	1708	1604		1425	1086	755	141	286	372
250	1500	1546	1539	1552	1415		1238	952	688	68.8	185	319
240	1327	1355	1346	1379	1213		987	769	591	12.4	89.0	254
230	1136	1134	1168	1202	1033		642	569	461			188
220	951	935	979	1031	833		256	357	304			120
210	780	754	798	855	652		12.4	156	131			70.7
200	639	611	638	699	502							12.4
190	521	490	506	567	392				12.4	12.4		
180	422	402	399	452	306							
170	351	337	321	355	236							
160	298	290	265	284	182							
150	255	250	223	235	149							
140	221	217	187	198	132							
130	192	191	161	167	123							
120	172	173	151	153	117							
110	147	140	78.9	91	95.7							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO													60 W		5 NOV 1960	
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100				
O.KP	4	4	2	2	2	2	2	2	3	3	3	A1				
HMIN	199	219	249	229	239	237	245	211	110	109	105	106				
SCAT	33.9	39.3	56.6	52.1	60.6	52.0	42.1	43.7	41.1	53.0	43.9	48.7				
HMAX	285	307	356	331	364	344	320	285	271	285	283	284				
SHMAX	230	182	284	217	239	237	181	432	987	1547	1734	1701				
KM																
370																
360																
350																
340																
330																
320																
310																
300																
290	477	320	252	261	181	245	294	834		2016	2413	2161				
280	474	297	198	234	154	209	263	832	1555	2011	2410	2156				
270	454	264	140	202	127	169	215	811	1555	1974	2360	2113				
260	412	216	79.8	166	97.9	126	155	769	1530	1901	2243	2024				
250	352	161	12.4	126	67.0	77.1	78.0	706	1459	1800	2076	1891				
240	272	106		81.7	12.4	32.2		605	1337	1659	1833	1710				
230	182	58.6		12.4				449	1172	1454	1544	1493				
220	102	4.5						176	954	1184	1214	1254				
210	55.9							703	868	937	990					
200	4.9							494	620	710	779					
190								343	447	536	602					
180								252	338	422	462					
170								191	272	344	370					
160								150	221	287	311					
150								120	183	243	265					
140								102	156	205	228					
130								93.1	140	173	197					
120								87.1	131	155	175					
110								12.4	84.4	144	162					

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO										60 W		5 NOV 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300			
O.KP	81	A1	0	80	A0	A0	A0	0	0	0	0	1			
HMIN			106					200	199	208	239	247	259		
SCAT			48.6				65.0	44.5	64.3	44.4	43.2	42.8			
HMAXF			307				318	314	338	331	344	346			
SHMAX			2043				1161	548	551	300	253	255			
KM															
350									679	508	416	446			
340										678	508	407	430		
330											500	385	403		
320							1433	834	666		480	353	367		
310			2571				1427	832	647						
300			2560				1405	814	619		448	311	313		
290			2497				1366	773	586		400	260	245		
280			2375				1306	712	541		338	204	174		
270			2209				1238	637	474		262	146	96.8		
260			1983				1150	548	392		171	79.7	12.4		
250			1751				1025	452	303		87.5	29.1			
240			1428				869	347	206	12.4					
230			1157				688	234	116						
220			893				459	148	62.1						
210			671				209	79.7	12.4						
200			511				12.4	12.4							
190			404												
180			333												
170			281												
160			237												
150			193												
140			168												
130			157												
120			150												
110			141												

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO													60 W		6 NOV 1960	
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100				
O.KP	1	1	2	2	2	2	2	2	2	2	2	A0				
HMIN	219	230	217	208	240	262	229	199	109	110	107					
SCAT	47.9	40.0	45.2	40.6	70.1	43.8	48.8	40.7	47.3	39.1	39.5					
HMAXF	321	326	310	284	388	352	316	283	277	269	276					
SHMAX	283	220	231	149	216	133	143	392	1021	1157	1483					
KM																
390														219		
380														218		
370														215		
360														210		
350														219		
340														219		
330														192		
330	446	389				181		205								
320	446	387				167		189		229						
310	441	373	389				150		169		228					
300	426	347	384				133		142		223					
290	401	310	370	286	116		114		212		754					
280	367	258	347	285	98.2		83.1		201		753		1433			
270	321	200	315	278	81.9		51.9		181		735		1426			
260	257	140	267	262	65.5				151		695		1388			
250	190	85.1	208	239	48.0				115		631		1316			
240	108	49.1	134	204			72.0		520		1220		1542			
230	57.7	7	70.0	155			12.4		378		1082		1341			
220	4.5		20.3	85.3					99.7		685		1081			
210				22.3					92.8		668		820			
200									12.4		407		162			
190											351		454			
180											262		357			
170											208		291			
160											168		241			
150											139		196			
140											120		162			
130											107		162			
120											98.9		132			
110											61.5		12.4			

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

7 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	3	3	3	3	3	2	2	2	1	1	1	0
HMIN	242	209	208	209	319	263	239	219	108	107	109	108
SCAT	40.6	26.9	26.0	74.4	56.2	50.6	54.5	30.7	50.9	41.2	44.5	47.4
HMAXF	323	273	263	329	620	373	348	277	285	285	290	290
SHMAX	311	227	142	181	146	142	176	274	94.9	1311	1672	1692
KM												
430					198							
420					198							
410					197							
400					192							
390					184							
380					173	198						
370					160	198						
360					141	195						
350					120	188	240					
340					95.4	177	239					
330	608			198	68.2	163	234					
320	607			198	12.4	145	224					
310	593			195		123	211					
300	560			191		100	195					
290	514			185		78.9	173	1240	1907	2260	2243	
280	428	599		177		58.5	146	679	1237	1900	2233	2220
270	310	597	410	167		40.3	116	669	1213	1844	2146	2144
260	167	562	408	156			85.7	624	1165	1728	2016	2029
250	63.7	487	382	143			54.3	544	1097	1564	1809	1851
240		382	327	128			6.1	427	995	1342	1545	1623
230		236	236	105				270	855	1059	1273	1341
220		95.2	107	71.8				49.0	691	810	1020	1016
210		12.4	26.9	12.4					534	617	775	774
200									397	472	588	590
190									299	374	465	464
180									226	304	382	382
170									172	250	319	325
160									136	205	267	278
150									116	167	222	236
140									108	145	190	198
130									102	136	164	176
120									95.7	129	150	165
110									64.8	95.2	115	95.3

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

7 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	0	0	0	A0	0	0	A0	A0	0	0	A0	0
HMIN	109	107	106		110	108	209	208	219	261	269	228
SCAT	51.8	65.1	58.2		49.7	58.1	43.1	38.6	41.8	47.3	46.4	39.9
HMAXF	301	317	309		304	307	308	302	314	356	357	306
SHMAX	1890	2123	1991		1569	1506	870	501	382	406	432	359
KM												
360										643	716	
350										640	712	
340										625	691	
330										594	654	
320		2144								550	601	
310	2277	2138	2161			1907	1771	1446	917	641	492	716
300	2277	2107	2147			1904	1764	1433	916	624	423	438
290	2252	2051	2103			1869	1731	1380	895	587	335	330
280	2184	1971	2025			1796	1672	1285	841	533	233	180
270	2073	1876	1919			1682	1586	1156	758	465	110	12.4
260	1925	1734	1776			1531	1477	993	646	388		458
250	1725	1568	1601			1350	1338	806	514	300		294
240	1693	1375	1401			1168	1161	595	358	203		123
230	1246	1153	1175			977	980	360	220	111		28.3
220	941	948	961			783	781	164	108	12.4		
210	748	760	778			626	585	38.9	26.9			
200	594	615	631			495	406					
190	478	500	510			390	284					
180	399	413	420			311	207					
170	342	348	351			248	155					
160	295	297	299			200	122					
150	251	253	256			166	102					
140	207	212	218			141	89.6					
130	178	179	187			125	81.2					
120	167	168	169			116	75.9					
110	105	141	120			12.4	58.7					

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

8 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	0	A0	2	2	2	2	2	B2	1	1	1	1
HMIN	212	220	211	200	231	246	248		108	110	109	107
SCAT	30.6	30.6	27.3	31.5	70.8	81.5	46.2		39.1	47.7	46.2	47.5
HMAXF	283	287	273	251	352	389	340		266	280	283	285
SHMAX	262	184	168	93	122	133	118		767	1245	1450	1547
KM												
390							127					
380							127					
370							125					
360						135	123					
350						135	120	189				
340						134	116	189				
330						132	111	186				
320						128	104	179				
310						122	98.3	168				
300						116	90.5	154				
290	643	446				110	81.7	133				
280	641	441	461			101	70.7	107				
270	613	411	460			90.0	59.0	80.2	1240	1741	1966	1901
260	550	361	432	240	76.9	46.6	52.1		1232	1667	1841	1773
250	446	281	377	240	62.4	16.9	12.4		1186	1580	1720	1646
240	284	173	274	233	46.1				1103	1451	1530	1479
230	131	73.5	134	213					969	1260	1273	1287
220	58.5	2.0	61.6	183					771	976	1060	1112
210				136					577	718	796	919
200				12.4					424	523	599	733
190									300	391	456	576
180									213	305	362	456
170									156	244	297	376
160									122	199	246	317
150									109	164	202	273
140									105	144	171	238
130									101	136	157	209
120									97.3	128	149	190
110									61.2	12.4	101	156

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

8 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QzKP		1	1	0	0	0	1	1		2	2	2
HMIN	107	109	107	110	113	110	209	209	234	269	259	239
SCAT	52.8	65.0	56.6	57.8	67.9	48.5	45.2	46.4	48.4	42.8	45.4	33.0
HMAXF	292	321	306	302	324	305	301	307	347	359	355	318
SHMAX	1475	2013	1737	1587	1601	1214	803	449	372	297	329	252
KM												
360										508	540	
350									540	502	539	
340									538	483	526	
330		2032			1555				524	449	500	
320		2032			1554				498	403	463	540
310		2017	1907	1771	1539	1555	1341	716	462	343	409	532
300	1640	1979	1901	1770	1507	1552	1341	712	415	272	337	499
290	1639	1917	1867	1751	1458	1519	1321	692	358	195	257	442
280	1618	1827	1804	1705	1388	1454	1269	656	296	107	171	362
270	1568	1721	1709	1628	1307	1356	1182	604	234	12.4	91.1	268
260	1481	1586	1590	1530	1207	1233	1065	530	170		12.4	165
250	1372	1400	1436	1407	1094	1069	911	445	93.8			75.2
240	1240	1197	1256	1258	966	897	717	345	46.2			12.4
230	1108	986	1050	1095	830	720	489	232				
220	985	796	869	914	690	562	233	116				
210	823	642	709	723	556	438	12.4					
200	664	526	576	559	452	323						
190	560	446	473	437	368	246						
180	456	382	394	346	300	188						
170	377	332	330	284	239	148						
160	319	289	282	238	192	121						
150	273	243	242	205	160	102						
140	233	209	204	177	136	88.0						
130	200	183	177	156	122	80.0						
120	187	165	165	139	113	74.2						
110	161	124	124	12.4		12.4						

ELECTRON DENSITY

9 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q ₄ KP	0	AM	AM	AM	AM		1	1	0	0	0	0
HMP	108			106		110	209	200	209	249	258	270
SCAT	49+2			60+8		45+1	56+9	56+7	36+8	49+1	62+8	49+7
HMA	286			323		300	310	304	292	354	381	356
SHMAX	1357			1629		1202	1013	546	277	275	313	251
KM												
390											382	
380											382	
370											379	
360										410	371	403
350										409	357	401
340										402	341	392
330				1640						385	320	376
320				1639						362	291	355
310				1622		1669	1446	754		329	253	318
300				1582		1669	1436	754	540	286	210	267
290	1640			1517		1664	1403	743	540	234	163	203
280	1633			1440		1587	1348	721	527	179	114	132
270	1596			1334		1476	1273	686	492	126	64+2	12+4
260	1519			1207		1336	1177	641	440	69+3	12+4	
250	1416			1072		1141	1035	584	367	12+4		
240	1277			911		951	832	508	280			
230	1133			761		754	587	417	183			
220	942			634		541	322	201	101			
210	754			531		411	53+1	146	12+4			
200	596			448		295						
190	482			379		221		12+4				
180	402			320		172						
170	343			268		138						
160	297			225		115						
150	256			190		98+7						
140	223			169		87+4						
130	202			157		80+1						
120	190			149		74+5						
110	177			129		12+4						

ELECTRON DENSITY

10 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,KP	2	2	1	1	A1	S1	1	1	2	2	2	3
HMIN	107	105	107	104	107		208	208	229	203	249	259
SCAF	42.1	61.7	57.1	58.2	62.7		45.7	42.9	38.0	49.1	57.7	45.1
HMAX	281	296	317	294	322		318	322	311	317	364	352
SHR	1110	1304	1453	1147	1191		733	578	397	369	322	254
KM												
370								917			417	
360											417	417
350											411	417
340											399	409
330					1131						380	391
320			1446		1131		1143	917	754	540	357	362
310			1441				1135	901	754	537	325	325
300		1341	1415	1240	1095		1100	858	738	523	288	275
290	1446	1338	1367	1238	1052		1038	795	694	498	245	215
280	1446	1318	1293	1221	999		949	702	627	462	195	153
270	1423	1281	1203	1186	936		830	597	538	415	138	90.5
260	1359	1225	1089	1132	864		699	482	429	359	78.8	12.4
250	1257	1160	1067	1061	788		541	357	298	295	12.4	
240	1107	1066	938	970	705		383	244	162	219		
230	950	945	720	865	619		219	147	12.4	139		
220	795	816	619	758	536		105	79.3		80.8		
210	651	685	534	641	457		25.6	24.6		43.5		
200	531	569	466	519	388							
190	438	469	412	414	326							
180	365	395	368	327	268							
170	306	338	327	270	218							
160	254	294	288	225	178							
150	207	254	253	188	146							
140	186	218	218	158	120							
130	174	196	184	142	108							
120	167	186	168	135	103							
110	150	162	136	128	87.2							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO										
60 W 11 NOV 1960										
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900 1000 1100
Q _z KP	3	3	4	4	5	5	5	3	3	2
HMIN	249	239	208	200	314	278	258	228	109	108 107 105
SCAT	54.3	43.4	34.4	114	63.4	59.3	53.1	40.9	43.4	44.5 57.9
HMAXF	356	329	269	391	454	401	366	319	282	296 297
SHMAX	286	253	199	257	146	139	159	430	791	1163 1786 1873
KM										
460					161					
450					161					
440					159					
430					155					
420					149					
410					141	170				
400				179	131	170				
390				179	119	168				
380				179	105	164				
370				178	90.7	157	219			
360	403			176	77.3	148	218			
350	401			173	64.8	137	214			
340	394			170	53.7	124	206			
330	378	439		166	43.4	108	193			
320	362	435		162	18.7	91.4	179	679		
310	332	419		156		74.1	159	674		
300	292	393		151		57.7	135	658	1460	2430 2144
290	244	353		145	43.1	110	631	1061	1453	2419 2137
280	189	296		138	8.4	84.2	600	1060	1391	2351 2098
270	127	228	477	130		57.5	536	1034	1311	2217 2028
260	75.0	151	469	120		12.4	440	981	1203	2031 1927
250	12.4	79.2	441	111			318	901	1066	1782 1796
240		12.4	395	98.9			159	805	922	1467 1623
230			309	84.7			28.3	697	775	1173 1418
220			165	67.8				581	639	900 1175
210			30.0	48.3				467	521	666 933
200				3				368	425	509 718
190								289	350	403 534
180								230	292	336 407
170								186	245	286 334
160								152	207	245 281
150								129	176	211 235
140								115	154	183 201
130								106	141	160 179
120								99.9	133	151 169
110								43.8	102	127 146

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO										
60 W 11 NOV 1960										
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100 2200 2300
Q _z KP	2	2	A3					A3	A2	2 2 1
HMIN	106	111	109					212	229	280 259 250
SCAT	62.2	61.2	57.6					43.4	44.8	50.0 39.5 61.3
HMAXF	305	314	312					302	327	369 353 353
SHMAX	1696	1444	1394					688	405	388 345 531
KM										
370										608
360										603 608 716
350										586 607 716
340										555 592 708
330										514 555 691
320			1446	1446					643	514 555 691
310	1771	1445	1446				1215		619	388 433 626
300	1768	1428	1431				1214		583	305 352 582
290	1746	1391	1394				1191		531	205 264 518
280	1701	1395	1394				1134		467	12.4 172 431
270	1632	1262	1246				1046		393	92.8 318
260	1556	1164	1151				922		307	12.4 172
250	1437	1055	1029				760		223	12.4
240	1289	931	895				549		119	
230	1108	798	767				299		12.4	
220	916	674	653				85.1			
210	741	566	555							
200	599	471	472							
190	489	398	401							
180	407	347	342							
170	348	310	292							
160	303	270	242							
150	265	222	199							
140	227	187	171							
130	195	172	156							
120	173	160	147							
110	155		64.6							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO											60 W		12 NOV 1960	
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100		
QzKP	1	1	2	2	2	2	2	A2	5	5	85	86		
HMIN	209	210	218	219	280	278	249		108	106				
SCAT	28.3	35.2	34.3	42.0	96.6	52.9	46.2		33.1	48.7				
HMAXF	275	278	291	297	449	380	337		271	295				
SHMAX	258	180	156	130	288	148	160		691	1321				
KM														
450					235									
440					234									
430					232									
420					229									
410					225									
400					220									
390					213	208								
380					205	208								
370					198	206								
360					187	201								
350					175	190								
340					160	178	262							
330					143	161	261							
320					124	141	253							
310					102	117	239							
300			335	240	79.2	92.6	220			1669				
290			335	238	55.3	66.3	194			1663				
280	679	403	326	230	3.7	24.6	161		1096	1627				
270	673	398	304	215			121		1096	1555				
260	628	377	268	195			76.2		1067	1451				
250	543	345	214	165			12.4		984	1306				
240	395	279	147	120					864	1105				
230	215	190	75.0	69.9					723	908				
220	87.1	86.4	21.2	12.4					576	724				
210	12.4								452	569				
200									352	451				
190									274	364				
180									214	300				
170									169	247				
160									135	203				
150									113	167				
140									107	145				
130									102	137				
120									97.0	130				
110									66.8	104				

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO										
60 W 12 NOV 1960										
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100 2200 2300
QzKP	86	86	88	8	8	88	A8	A8	9	9 9 9
HMIN				109	112		210		299	289 299 280
SCAT				80.8	78.7		67.3		67.1	60.1 51.1 35.0
HMAXF				353	372		348		432	408 413 346
SHMAX				1696	1616		1695		833	683 618 320
KM										
440									949	
430									949	
420									942	875
410									924	875 874
400									894	871 860
390									858	855 829
380					1240				808	825 782
370					1240				746	786 719
360			1341	1232					669	734 638
350			1341	1215			1861		577	666 545 688
340			1332	1187			1854		477	580 441 684
330			1314	1150			1828		369	476 321 650
320			1285	1102			1779		253	365 204 594
310			1245	1044			1767		148	241 104 517
300			1195	978			1621		12.4	129 12.4 410
290			1143	906			1514			254
280			1067	830			1385			49.6
270			981	754			1240			
260			887	680			1087			
250			791	610			920			
240			695	543			728			
230			605	479			492			
220			528	421			229			
210			460	366			12.4			
200			401	317						
190			351	274						
180			309	235						
170			272	203						
160			239	175						
150			210	152						
140			184	134						
130			162	122						
120			150	114						
110			58.9							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO										
60 W 13 NOV 1960										
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900
Q _z FP	9	9	9	59	59	E9	A9	A9	H9	9
HMIN	349	211	206				350	109	109	108
SCAT	54.6	44.1	37.9				63.5	51.0	61.6	62.3
HMAXF	468	297	264				449	279	262	329
SHMAX	596	661	185				125	490	406	1179
KM										
470	794									
460	790									
450	773						161			
440	741						160			
430	697						157			
420	643						152			
410	574						146			
400	493						137			
390	404						128			
380	305						115			
370	203						98.9			
360	112						73.6			
350	12.4									
340										
330									1096	
320									1090	
310									1071	
300	1215								1035	
290	1207								989	
280	1169								927	
270	1103	389							565	
260	996	398							561	432
250	826	376							546	431
240	601	350							520	427
230	318	313							485	417
220	92.3	253							435	401
210		172							375	382
200		12.4							318	354
190									268	319
180									225	278
170									190	237
160									161	199
150									139	163
140									123	138
130									111	125
120									104	119
110									97.5	113
									41.5	55.6
									68.6	146

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO										
60 W 13 NOV 1960										
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
Q _z FP	8	8	A8	A8	8	56	6	6	A7	A7
HMIN	107	109			110		230	208	200	239
SCAT	44.1	60.2			61.4		50.3	58.9	48.3	46.2
HMAXF	221	324			346		320	324	324	321
SHMAX	367	1193			1116		764	881	543	531
KM										
430										477
420										475
410										470
400										459
390										444
380										500
370										498
360										492
350						794				482
340						793				465
330	1050					787	1228	1191	698	949
320	1048					778	1228	1190	696	949
310	1036					764	1215	1175	682	937
300	1008					742	1178	1143	647	900
290	964					717	1117	1094	604	845
280	908					688	1033	1028	555	761
270	843					658	906	935	500	632
260	776					626	741	806	440	454
250	709					592	519	649	380	215
240	641					555	268	466	319	12.4
230	577					515	12.4	295	262	
220	508	519				475		160	206	
210	500	470				433		32.2	149	
200	478	428				388			12.4	
190	441	388				339				
180	396	347				282				
170	345	305				219				
160	294	267				177				
150	245	230				146				
140	203	191				122				
130	176	164				109				
120	167	151				102				
110	140	124				12.4				

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO										
60 W 14 NOV 1960										
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900
Q _z FP	5	5	5	5	4	4	4	3	3	3
HMIN	240	230	218	200	268	268	260	209	110	109
SCAT	43.5	44.2	35.1	35.5	73.0	59.6	48.0	27.4	42.2	41.7
HMAXF	322	318	283	263	397	379	333	262	261	266
SHMAX	381	304	232	119	120	127	123	273	907	1111
KM										
400					127					
390					127					
380					125	161				
370					123	160				
360					119	157				
350					114	151				
340					107	144	214			
330	679				100	134	213			
320	679	508			91.6	124	210			
310	667	504			81.7	108	201			
300	636	488			71.1	89.5	189			
290	589	457	508		59.1	71.3	175			
280	521	415	507		46.3	52.0	150			
270	427	363	490	262	12.4	12.4	109	794	1433	1669
260	313	299	452	262				793	1433	1659
250	180	223	395	254				756	1409	1605
240	12.4	132	315	236				667	1344	1503
230		12.4	207	210				501	1252	1361
220		68.2	165					241	1094	1132
210			101					88.2	867	931
200			12.4					38.9	882	867
190								610	640	693
180								418	475	523
170								296	368	413
160								223	298	341
150								177	248	287
140								144	209	246
130								122	177	210
120								108	151	178
110								98.6	134	155
								12.4	65.5	119
										161

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO							60 W			14 NOV 1960		
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	B4	4	5	A5	A5	A4	4	4	5	5	4	
HMIN	107	103	105	110	110	110	218	200	230	208	249	229
SCAT	51.7	43.3	51.7	56.5	57.4		50.1	51.0	38.5	50.2	46.1	42.9
HMAXF	288	283	300	298	294		310	306	318	318	337	310
SHMAX	1602	1586	1625	1540	1302		796	626	364	340	230	206
KM												
340											382	
330											380	
320							1240		679	508	369	375
310							1240	917	672	505	349	375
300			1876	1786	1500		1227	914	642	492	323	370
290	1876	2161	1860	1777	1499		1189	894	590	469	284	353
280	1863	2158	1809	1742	1479		1126	853	514	438	232	290
270	1816	2111	1716	1678	1432		1040	801	411	394	173	294
260	1726	2004	1595	1585	1359		923	726	298	336	106	241
250	1610	1843	1446	1467	1269		769	632	197	263	12.4	175
240	1462	1627	1268	1319	1166		594	518	105	184		89.4
230	1284	1380	1111	1154	1037		366	397		105		12.4
220	1107	1085	922	945	884		78.1	275		59.7		
210	910	827	749	725	718			131		12.4		
200	737	631	612	542	563							
190	595	501	496	419	429							
180	478	411	405	336	326							
170	391	349	329	280	251							
160	330	303	269	237	202							
150	289	263	218	198	169							
140	251	230	175	170	143							
130	215	203	159	155	125							
120	190	178	151	145	115							
110	156	164	136	12.4	12.4							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

15 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	4	4	4	4	A4	3	3	3	6	6	6	6
HMIN	250	225	209	208		284	246	210	110	108	109	107
SCAT	52.4	29.8	31.1	28.2		59.4	57.2	43.0	35.6	45.9	44.4	57.4
HMAXF	350	283	267	256		389	344	279	271	274	287	307
SHMAX	197	114	104	40		85	101	284	759	1293	1617	1769
KM												
390						112						1096
380						111						1088
370						109						834 1064
360						105						832 1020
350	284					99.6	139					817 965
340	283					92.5	139					783 893
330	275					84.9	137					716 734 801
320	263					74.5	133					713 674 692
310	244					62.3	127					698 603 575 960
300	221					48.2	118					671 520 455 956
290	192	286				23.7	109					633 427 333 935
280	156	285						56.5	1143	1891	2294	1902
270	113	272	262			80.4	559	1143	1887	2214	1812	
260	70.0	242	259	112		59.8	538	1116	1845	2089	1688	
250		198	242	110		28.3	505	1041	1755	1914	1506	
240		138	214	103			451	929	1631	1653	1292	
230		64.7	165	88.7			361	795	1449	1340	1035	
220			85.3	67.8			199	654	1147	1016	808	
210			12.4	25.6			12.4	515	822	708	628	
200								405	583	520	492	
190								323	413	410	407	
180								258	321	338	345	
170								207	264	289	294	
160								168	219	252	246	
150								139	188	220	199	
140								119	163	191	180	
130								107	144	166	172	
120								99.4	133	151	165	
110								12.4	83.8	105	134	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

15 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	6	6	A6	A6	A6	A8	A8	A8	8	8	8	A8
HMIN	105	106	103		108		209	232	281	329	348	269
SCAT	55.7	55.3	55.7		59.0		57.4	44.6	56.0	50.9	58.1	55.2
HMAXF	321	324	327		304		336	338	408	445	470	388
SHMAX	1683	2027	1927		1569		1043	633	567	602	868	728
KM												
470												1096
460												1088
450												834 1064
440												832 1020
430												817 965
420												783 893
410												716 734 801
400												713 674 692
390												698 603 575 960
380												671 520 455 956
370												633 427 333 935
360												585 326 200 897
350												528 217 81.3 846
340												460 103 780
330	1669	2128	2016				1341	960	388	12.4		700
320	1668	2126	2008				1337	952	388			609
310	1653	2095	1969			1786	1270	861	230			503
300	1610	2030	1896			1784	1203	785	159			384
290	1537	1929	1792			1762	1123	694	87.0			263
280	1436	1792	1654			1714	1015	593				121
270	1313	1628	1494			1635	884	481				12.4
260	1188	1444	1314			1535	736	371				
250	1058	1249	1141			1411	584	248				
240	924	1072	955			1272	400	128				
230	803	889	785			1095	239					
220	692	736	649			922	114					
210	499	612	544			731	12.4					
200	521	516	468			528						
190	456	443	411			366						
180	401	384	362			263						
170	351	335	316			206						
160	306	291	269			168						
150	264	253	226			138						
140	225	221	189			119						
130	198	198	164			109						
120	187	186	152			103						
110	162	155	139			84.9						

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

16 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	8	8	6	6	5	5	5	6	6	A6	5	
HMIN	270	220	332	319	310	284	330	258	109	106		110
SCAT	44.8	72.5	68.6	46.4	59.6	77.5	60.7	37.7	33.5	43.9		57.1
HMAXF	362	343	485	413	423	435	438	326	258	269		300
SHMAX	557	484	257	210	266	248	127	324	989	1288		1655
KM												
490												262
480												262
470												259
460												254
450												246
440												234
430												220
420												203
410												184
400												164
390												142
380												121
370	917											100
360	917											82.0
350	900	540										63.8
340	858	540	43.5									130
330	795	536										82.5
320	717	526										12.4
310	610	512										83.5
300	483	491										61.5
290	334	468										38.8
280	182	438										407
270	12.4	400										258
260		353										58.7
250		295										1879
240		226										1765
230		131										1574
220		12.4										1289
210												874
200												580
190												353
180												241
170												179
160												142
150												120
140												109
130												103
120												97.2
110												12.4

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

16 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	5	A5	A3	A3	3	A3	3	3	4	4	4	3
HMIN	107				109	107	200	200	199	242	230	228
SCAT	56.1				54.8	52.2	45.8	51.2	52.9	44.5	35.1	44.5
HMAXF	314				304	300	296	310	304	321	293	309
SHMAX	2065				1778	1574	1095	871	533	388	283	275
KM												
330												707
320	2794											707
310	2291											2144
300	2258											2032
290	2189											1771
280	2077											1729
270	1939											1764
260	1764											1625
250	1560											1428
240	1322											13

ELECTRON DENSITY

RAYME AFB, PUERTO RICO					60 W					17 NOV 1960				
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300		
Q,KMP	4	4	A4	A4	A4	3	3	3	A3	3	3	2		
HM1N	105	106			108	205	195	187	269	251	242	218		
SCAT	56.6	69.7			49.3	38.4	40.0	55.3	50.8	32.6	37.6	36.9		
HMA	277	296			293	286	266	311	351	319	316	294		
SHMAX	1230	1469			1458	991	621	451	309	239	273	233		
KM														
370									477					
360									477					
350									471					
340									456					
330									432					
320								573	400	540	540			
310								573	356	530	536			
300		1771			1907			567	298	493	515	477		
290		1763			1904	1907		552	230	433	474	475		
280	1446	1722			1869	1896		527	143	346	414	460		
270	1411	1674			1794	1826	1215	495	12.4	240	335	427		
260	1416	1532			1679	1684	1208	455		115	242	379		
250	1365	1381			1528	1488	1164	397			132	303		
240	1289	1181			1344	1240	1082	339				211		
230	1198	968			1104	907	963	275				108		
220	1080	783			871	563	802	215				28.3		
210	924	634			654	151	608	163						
200	758	517			476		250	131						
190	594	433			353			68.1						
180	453	369			273									
170	351	320			218									
160	287	279			177									
150	237	243			147									
140	194	202			124									
130	147	178			110									
120	154	168			103									
110	145	145			69.4									

ELECTRON DENSITY

[illegible]

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 19 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
O ₄ KP	2	2	1	1	1	3	3	3	A3	A3	3	1
HMIN	200	218	208	201	251	279	300	218	109	108	107	109
SCAT	61.3	31.0	23.9	22.1	87.8	58.2	37.5	37.2	44.2	37.9	38.7	50.5
HMAXF	312	281	254	243	403	378	356	286	266	281	269	295
SHMAX	262	118	69	47	126	83	65	243	705	1110	1253	1555
KM												
370					112							
360					112							
350					111							
340					110	112						
330					108	111						
320					105	109	143					
310					101	105	142					
300					97.1	95.6	137					
290					92.1	92.5	126					
280	335				86.5	85.0	112					
270	335				80.0	74.4	89.1					
260	332				73.2	61.3	12.4					
250	324	286			65.4	46.7		532	1683		1891	
240	312	286			56.8	7.0		529	1683		1886	
230	295	277			47.1			508	1050	1638	1969	1772
220	275	254	219		29.3			471	1045	1552	1942	1673
210	249	218	217	161				408	1016	1406	1846	1515
200	216	155	199	160				303	963	1194	1696	1327
190	173	91.3	162	146				141	876	943	1469	1142
180	119	26.9	103	115				28.3	754	720	1182	934
170	65.0	26.9	68.7					601	548	877	746	
160	2.6							439	428	600	570	
150								305	344	444	440	
140								219	284	351	355	
130								167	238	293	299	
120								135	201	249	252	
110								113	171	213	209	
								105	150	180	174	
								97.7	137	160	157	
								86.6	128	151	149	
								44.7	92.5	132	110	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 19 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
O ₄ KP	1	A1	A0	A0	A0	A1	1	1	2	2	A2	2
HMIN	109	109	110	109			208	212	223	250	259	265
SCAT	45.7	50.6	58.1	51.4			41.8	42.9	48.6	39.7	44.5	34.9
HMAXF	276	284	292	288			295	300	304	332	343	330
SHMAX	1265	1346	1225		953		515	422	252	210	218	165
KM												
350											375	
340											382	375
330											382	367
320											374	350
310											352	327
300			1393				917	754	417	320	287	296
290			1669	1393			914	744	408	276	232	245
280	1669	1666	1379		1096		887	712	391	224	174	178
270	1661	1636	1344		1063		835	665	368	165	116	88.2
260	1616	1574	1283		1014		756	586	334	103	12.4	
250	1527	1480	1213		948		648	485	281	12.4		
240	1402	1354	1117		860		514	350	212			
230	1241	1175	987		764		369	204	136			
220	1053	981	839		666		201	75.3				
210	849	797	680		573		32.2					
200	662	630	533		488							
190	514	488	400		414							
180	404	385	325		342							
170	333	321	267		261							
160	282	274	218		194							
150	239	232	185		154							
140	206	196	166		127							
130	190	175	155		111							
120	178	165	147		103							
110	119	84.9	12.4		76.2							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 20 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
O ₄ KP	2	2	2	2	3	A3	3	3	3	3	3	3
HMIN	224	220	221	201	230	225	291	206	108	108	108	110
SCAT	44.3	41.0	31.5	39.8	54.7	77.1	49.8	45.3	50.3	43.0	48.1	42.5
HMAXF	310	291	282	276	333	369	379	297	299	284	289	285
SHMAX	219	177	120	129	104	146	92	280	1014	1360	1821	1582
KM												
380												143
370												142
360												143
350												141
340												131
330												138
320												134
310	389											129
300	389											122
290	383	348										74.7
280	368	348	286									52.7
270	345	342	285	251	109	96.4						477
260	312	324	275	250	95.2	84.6						1240
250	254	299	248	241	79.1	72.1						474
240	175	259	210	224	61.4	59.4						1231
230	98.0	197	158	201	44.4	46.3						1969
220	48.9	109	91.6	164	1.9	20.1						1197
210		12.4										1965
200												2407
190												2331
180												2154
170												2196
160												2025
150												2025
140												1860
130												1777
120												1622
110												1475
												1353
												1064
												783
												577
												438
												355
												301
												263
												232
												206
												173
												151
												119
												60.0

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 20 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
O ₄ KP	3	3	1	1	81	82	2	2	1	1	1	4
HMIN	108	106	107	110	109		200	200	210	259	219	269
SCAT	43.1	46.2	52.7	45.7	47.6		48.3	56.5	42.0	48.3	56.5	45.7
HMAXF	293	291	312	284	276		301	317	282	346	322	365
SHMAX	1640	1588	1759	1372	1110		562	417	233	227	193	208
KM												
370												335
360												334
350										362		326
340										360		311
330										352	262	288
320										336	262	255
310			2015				875	540				
300	2161	2048	1989				875	538		311	260	213
290	2158	2047	1926	1907			863	509	446	240	242	113
280	2113	2008	1825	1902	1500		833	480	446	190	226	67.1
270	2005	1935	1697	1859	1494		783	445	438	132	207	12.4
260	1839	1816	1517	1768	1456		716	401	417	51.4	185	
250	1632	1638	1303	1631	1379		631	348	385		158	
240	1400	1432	1113	1466	1279		521	288	338		125	
230	1135	1198	905	1241	1144		391	229	269		83.9	
220	914	936	730	956	971		229	171	173		12.4	
210	734	724	594	722	779		99.4	101	12.4			
200	590	566	490	526	596							
190	476	450	409	383	434							
180	393	371	342	305	312							
170	328	316	287	253	239							
160	278	276	242	212	196							
150	234	243	202	177	167							
140	198	214	171	153	144							
130	177	188	157	139	127							
120	168	170	149	130	117							
110	148	145	127	12.4	76.1							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO													60 W	21 NOV 1960
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100		
Q _z FP	4	4	6	6	6	F5	5	5	5	5	5	5		
HMIN	220	210	201	258	119	281	237	205	112	108	106	110		
SCAT	45.1	23.5	35.6	61.2	60.0	45.1	48.7	42.9	46.7	38.0	45.7	45.5		
HMAXF	307	260	272	374	429	374	329	290	294	270	291	297		
SHMAX	244	121	95	148	156	123	128	262	982	1056	1368	1521		
KM														
430					198									417
420					197									416
410					193									335
400					186									335
390					177									330
380					179	166	198							318
370					179	151	198							298
360					177	132	194							273
350					173	110	184							283
340					166	85.6	169							243
330					157	58.6	150	198						205
320					147	12.4	127	197						167
310	432				134	101	191							164
300	429				118	74.3	181	1303		1876	1069			476
290	417				94.4	47.1	166	477	1301	1876	1956			475
280	394			198	78.0		148	471	1274	1669	1850	1893		475
270	363	389	198	55.6			125	452	1214	1669	1777	1782		461
260	311	389	193	12.4			97.5	421	1132	1638	1661	1631		435
250	239	371	179				68.0	376	1016	1549	1500	1444		337
240	144	319	160				33.6	308	875	1407	1295	1231		337
230	62.6	215	129					216	726	1204	992	1014		289
220	4.1	89.0	91.3					113	568	955	769	784		214
210			49.3					47.7	431	710	559	609		137
200									326	516	439	480		69.3
190									252	379	355	390		20.3
180									197	288	296	326		
170									155	229	252	277		
160									127	188	213	234		
150									108	160	171	197		
140									96.1	140	145	169		
130									90.2	125	137	154		
120									84.4	116	130	141		
110										84.1	97.4	12.4		

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO													60 W	21 NOV 1960
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300		
Q _z FP	5	5	6	6	6	5	5	5	5	6	6	A5		
HMIN	107	109	111	110	108	115	200	200	289	299	259	237		
SCAT	54.8	46.4	58.7	54.5	56.9	53.1	54.7	57.0	50.7	48.8	40.0	44.5		
HMAXF	313	290	326	320	306	293	297	320	393	405	343	336		
SHMAX	2009	1699	1924	1823	1788	1426	733	331	231	277	257	290		
KM														
410														417
400														416
390														335
380														330
370														318
360														298
350														273
340														283
330														243
320	2294		2032	2032					417	162	108	435	461	477
310	2291		1996	2015	2032				414	118	64.9	394	435	475
300	2260		1936	1964	2025	1786	1050		405	76.6	12.4	337	398	475
290	2190	2227	1844	1875	1990	1784	1066	389	12.4			264	349	475
280	2081	2201	1731	1767	1923	1758	1025	365				179	289	475
270	1941	2117	1577	1604	1820	1700	985	337				94.3	214	475
260	1748	1993	1397	1431	1689	1606	930	303				12.4	137	475
250	1514	1814	1208	1248	1535	1488	857	265					69.3	475
240	1261	1599	1019	1045	1359	1336	762	223					20.3	475
230	998	1368	817	856	1153	1176	648	175						475
220	798	1075	648	688	969	1005	513	133						475
210	631	812	532	555	783	816	342	88.0						475
200	514	604	448	448	607	628	12.4							475
190	427	465	382	359	454	432								475
180	362	380	331	294	327	275								475
170	315	325	286	247	237	168								475
160	277	284	246	210	184	109								475
150	240	248	209	182	151	84.1								475
140	205	211	178	161	126	71.2								475
130	178	180	157	142	111	66.1								475
120	165	164	146	130	103	61.0								475
110	119	55.6			12.4	84.8								475

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO													60 W	22 NOV 1960
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100		
Q _z FP	A5	C5	C5	C5	C5	C4	C4	C4	A3	3	3	3		
HMIN	269								110	108	109	107		
SCAT	37.0								45.6	35.8	49.5	50.9		
HMAXF	339								287	262	279	287		
SHMAX	254								965	1226	1365	1276		
KM														
340	540													
330	533													
320	505													
310	460													
300	389													
290	290													
280	144								1341			1542		
270	12.4								1332			1786	1534	
260									1293	2294	1772	1497		
250									1219	2292	1723	1428		
240									1121	2230	1636	1332		
230									970	2082	1526	1203		
220									783	1844	1356	1053		
210									605	1405	1112	873		
200									459	926	878	709		
190									349	522	691	568		
180									263	355	539	457		
170									208	280	422	372		
160									169	230	328	308		
150									139	192	263	262		
140									118	162	216	222		
130									103	141	178	184		
120									92.6	126	151	160		
110									84.9	117	136	151		
									12.4	86.3	109	135		

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO							60 W			22 NOV 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
QzKP	3	3	2	2	2	4	4	4	A3	A3	A3	A3	
HMIN	109	108	108	108	107	115	198	229	227	279		209	
SCAT	41.3	44.5	49.1	54.0	54.4	38.9	51.9	43.7	53.3	40.3		49.2	
HMAXF	290	280	284	287	294	261	283	307	357	355		299	
SHMAX	1446	1264	1250	1243	1211	652	461	212	223	181		222	
KM													
360										286	348		
350										284	347		
340										278	336		
330										267	312		
320										249	281		
310										228			
300	2032				1446			389	202	169		362	
290	2032	1669	1542	1555	1445		716	373	174	96.8		359	
280	2000	1669	1539	1549	1424		716	351	144	12.4		348	
270	1909	1647	1509	1518	1378	1143	705	320	116			330	
260	1760	1583	1448	1460	1307	1142	681	270	91.4			306	
250	1547	1470	1352	1372	1221	1118	643	196	68.4			273	
240	1263	1324	1222	1258	1095	1056	593	104	47.7			235	
230	1204	1127	1071	1124	953	956	528	12.4				152	
220	755	935	896	936	802	799	445					74.6	
210	581	736	725	698	638	600	334					12.4	
200	474	587	579	476	482	404	145						
190	400	474	461	363	366	262							
180	343	389	372	296	278	160							
170	298	327	311	249	215	109							
160	256	279	271	212	172	8.1							
150	217	242	239	181	142	70.4							
140	187	209	209	152	121	64.1							
130	164	182	176	129	108	57.6							
120	152	168	155	119	99.7	51.0							
110	76.1	136	131	101	72.9								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

23 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z FP	A3	A3	4	4	4	2	2	2	52	A2	2	1
HMIN	213	213	209	219	247	226	207	128	109		108	108
SCAT	39.6	39.0	41.8	49.9	71.3	50.7	73.4	43.9	42.2		36.2	52.2
HMAXF	291	292	280	308	379	341	346	276	271		274	288
SHMAX	144	114	92	115	145	111	156	323	753		1143	1500
KM												
380					156							
370					156							
360					154							
350					150	152	161					
340					145	152	160					
330					138	150	159					
320					130	145	156					
310				179	121	136	151					
300	274	219		178	110	126	145					
290	274	219		173	95.7	112	138			1891		
280	269	214	174	165	79.2	96.2	130	461	1143	1727	1880	
270	254	202	172	153	61.7	79.7	120	460	1143	1721	1834	
260	231	184	165	139	45.3	64.9	107	447	1124	1657	1751	
250	201	158	153	119	12.4	51.6	91.7	422	1071	1527	1647	
240	161	119	138	90.9		40.6	75.2	385	989	1341	1491	
230	110	78.0	113	60.8		12.4	59.2	339	870	1104	1271	
220	53.4	43.7	74.6	12.4			44.6	284	708	879	1033	
210			12.4				12.4	226	544	685	779	
200								170	389	541	576	
190								126	276	426	433	
180								95.2	207	348	351	
170								75.0	161	295	294	
160								61.5	128	254	249	
150								54.9	107	220	213	
140								48.2	94.2	192	181	
130								12.4	87.4	161	161	
120									78.0	139	151	
110									54.0	115	132	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

23 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z FP	A1	R1	2	2	2	2	A2	2	4	4	4	2
HMIN	106	108	107	110	110	112	200	200	218	268	262	227
SCAT	39.1	47.2	46.2	38.4	41.1	47.2	43.7	38.4	42.0	65.4	60.0	56.1
HMAXF	268	282	274	263	270	273	283	260	304	415	406	361
SHMAX	1172	1268	1153	934	864	733	416	133	121	277	265	242
KM												
420										298		
410										297	310	
400										294	309	
390										287	304	
380										275	295	
370										261	281	304
360										243	263	304
350										224	241	301
340										204	215	293
330										181	185	279
320										155	151	262
310										214	127	120
300										213	99.6	92.3
290		1654					716			208	72.8	70.3
280		1653	1555			1050	715			196	49.2	52.0
270	1786	1626	1552	1446	1240	1048	700			179	12.4	32.2
260	1765	1561	1518	1444	1223	1028	664	286	155			83.1
250	1686	1459	1448	1405	1170	983	614	281	125			61.1
240	1547	1320	1347	1314	1079	919	537	266	90.1			44.5
230	1354	1135	1197	1178	957	824	443	244	56.7			12.4
220	1095	930	1001	994	811	705	338	210	12.4			
210	820	725	786	779	659	565	221	151				
200	597	553	599	582	514	426	12.4	12.4				
190	442	435	462	434	399	293						
180	358	356	366	329	305	192						
170	305	302	302	270	237	130						
160	265	256	257	228	190	95.4						
150	229	212	220	192	158	78.2						
140	197	179	189	163	133	69.4						
130	177	167	164	142	112	64.9						
120	166	152	150	131	102	60.4						
110	110	98.9	115	124	12.4							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

24 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z FP	2	2	3	3	A3	1	1	1	52	2	2	2
HMIN	218	205	216	229	199	252	268	128	110	108	108	107
SCAT	52.7	40.9	32.9	37.7	75.2	58.4	44.2	29.4	35.6	43.3	46.7	40.7
HMAXF	324	282	272	300	350	361	357	260	251	260	273	274
SHMAX	284	193	75	100	197	132	118	308	599	745	966	1127
KM												
370						170						
360						193	170	198				
350						193	168	197				
340						193	164	191				
330	417					190	157	180				
320	416					186	148	164				
310	409					180	137	142				
300	395			203	171	123	116					
290	372	375		200	162	106	84.7					
280	344	375	179	188	150	87.5	54.7					
270	305	368	179	172	138	68.8	12.4					
260	251	348	173	147	124	49.2		608	1050	1050	1215	1509
250	183	321	158	111	108			590	1049	1036	1163	1417
240	114	275	137	66.7	91.4			537	1024	994	1085	1285
230	60.9	206	104	12.4	74.7			448	961	926	974	1106
220	12.4	122	56.8		58.9			342	847	825	831	914
210		45.6			43.3			244	683	699	680	724
200					3.1			167	503	562	544	564
190								117	350	438	439	452
180								87.9	240	339	361	374
170								69.8	180	268	305	322
160								59.0	143	218	262	283
150								53.3	120	180	221	247
140								45.5	105	150	188	213
130								12.4	91.8	128	160	184
120									77.4	117	140	169
110									12.4	97.8	115	142

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

24 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z FP	2	2	3	A3	A3	A5	A5	5	4	4	4	5
HMIN	109	109	106	108		209	199	199	239	259	277	268
SCAT	49.9	42.3	51.0	52.6		31.2	55.1	39.9	52.7	49.9	52.6	40.6
HMAXF	286	284	291	293		264	316	276	347	352	400	358
SHMAX	1179	1210	1319	1438		454	704	276	190	166	181	174
KM												
400											240	
390											238	
380											232	
370											221	
360											257	205
350										262	257	186
340										261	253	163
330										255	244	136
320							939			245	229	109
310							936			229	211	85.2
300			1583	1786			918			210	186	63.5
290	1446	1669	1583	1784			880			185	151	45.6
280	1441	1664	1566	1758			832	540		154	112	12.4
270	1410	1621	1508	1699		1143	776	537		123	67.7	12.4
260	1350	1528	1437	1602		1137	704	519	92.4	12.4		
250	1261	1393	1338	1480		1079	613	482	61.4			
240	1141	1216	1193	1331		967	502	431	12.4			
230	993	1041	1027	1119		797	370	354				
220	810	785	844	891		541	241	245				
210	638	587	674	680		97.2	140	126				
200	504	459	537	519			12.4	12.4				
190	411	376	437	395								
180	348	317	365	313								
170	298	272	308	253								
160	257	235	262	209								
150	219	201	222	177								
140	183	174	186	155								
130	169	158	159	140								
120	156	149	147	131								
110	127	68.6	122	92.6								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 25 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Ω_{KHP}	A4			4		A4		4		3	3	4
KMIN		108	109	107	110	200	190	200	220	227	198	200
SCAT		70.0	52.3	41.7	46.6	41.3	51.2	45.0	48.8	43.3	34.0	51.7
HMAXF		322	308	292	281	282	300	283	340	330	280	285
SHMVA		1755	1537	1435	1337	892	762	348	246	258	174	183
KM												
350									335			
340									335	417		
330		1669							332	417		
320		1668							321	411		
310		1656	1786				1050		302	394		
300		1627	1774	2032			1050		276	365		
290		1581	1730	2030	1907	1626	1039	608	246	326	362	286
280		1554	1659	1986	1906	1624	1009	607	213	275	362	285
270		1461	1560	1880	1878	1589	957	595	179	217	353	280
260		1349	1399	1718	1807	1498	887	567	146	161	328	269
250		1221	1239	1500	1692	1371	801	527	117	181	289	252
240		1095	1035	1249	1537	1198	702	467	88.4	69.3	233	232
230		909	846	1019	1319	973	601	386	58.1	30.0	170	204
220		751	675	772	1020	699	489	279	4.1		102	167
210		610	540	571	744	371	362	140			57.1	114
200		494	441	432	543	12.4	215	12.4			12.4	12.4
190		407	365	342	391		12.4					
180		343	310	282	293							
170		298	266	237	230							
160		262	230	205	185							
150		228	201	173	154							
140		191	174	140	130							
130		173	145	125	111							
120		162	134	118	100							
110		127	70.2	105	12.4							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 26 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
N4FD	1	A1	A3	3	A3	A3	3	A3	A3	3	3	3
HMTN	109	107	106	109	206	189	202	218	248	227	210	210
SCAT	44.3	54.9	45.7	41.0	50.6	44.2	54.2	51.4	60.7	45.7	39.9	39.9
HMAXF	284	293	277	274	293	270	310	316	369	318	290	290
SHMAXF	1496	1620	1320	1158	977	484	322	186	248	201	127	127
KM												
370										310		
360										308		
350										303		
340										293		
330										278		
320									280	261	335	
310								446	279	239	333	
300					1555			443	273	209	323	240
290	2080	1905			1554			432	261	173	305	240
280	2074	1879	1786	1669	1530			413	245	132	281	236
270	2022	1822	1775	1664	1476	875		388	223	91.7	245	225
260	1924	1731	1723	1618	1391	864	359	196	57.4	195	205	180
250	1772	1617	1625	1518	1282	831	310	157	12.4	135	180	180
240	1546	1459	1490	1376	1129	782	257	111		81.2	144	144
230	1266	1259	1311	1176	921	695	198	62.4		36.8	98.6	98.6
220	1011	1028	1094	956	627	573	137	12.8				54.8
210	759	808	847	761		174	405	82.4				
200	559	625	647	589			233					
190	430	488	487	446			49.0					
180	352	396	384	354								
170	300	300	316	286								
160	259	282	269	239								
150	222	245	231	202								
140	191	212	198	172								
130	168	185	172	148								
120	154	169	154	132								
110	114	146	133	65.5								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

27 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	3	3	3	3	A3	A3	A3	3	3	3	A3	4
HMIN	210	214	217	208	239	240	218	211	109	108	108	110
SCAT	52.5	39.6	49.2	50.1	59.8	56.7	61.5	36.9	42.7	41.3	38.3	38.6
HMAXF	320	300	311	311	347	355	329	277	271	280	265	265
SHMAX	187	141	182	177	232	135	142	229	678	1114	1028	983
KM						174						
360						304	174					
350						303	171					
340						298	166	179				
330	262					289	157	178				
320	262		286	262		289	157	178				
310	260		286	262	275	146	175					
300	253	262	282	259	259	133	169					
290	241	258	272	251	237	117	161					
280	224	246	256	237	208	97.7	151	508	982	1640		
270	203	225	235	220	173	79.0	139	503	982	1616	1555	1446
260	176	196	208	196	129	61.1	124	481	967	1542	1549	1441
250	143	157	170	165	80.9	42.6	103	445	926	1437	1497	1393
240	108	106	124	129	12.4		77.2	378	857	1256	1392	1289
230	75.6	67.4	68.9	91.4			50.8	269	752	1047	1249	1150
220	48.0	37.7	20.3	57.8			12.4	108	625	811	1028	963
210									500	596	807	756
200									383	442	623	589
190									290	339	483	459
180									222	269	372	374
170									171	215	298	317
160									135	171	248	275
150									108	139	212	239
140									92.4	125	179	205
130									83.0	120	156	178
120									76.6	114	139	155
110									60.5	89.8	98.4	60.0

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

27 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	4	4	A5	A5	A5	A4	4	A4	A5	F5	5	5
HMIN	107	108					208	207	208	287	239	219
SCAT	56.3	51.1					42.7	40.2	47.8	49.6	59.5	51.6
HMAXF	276	288					291	284	297	387	352	322
SHMAX	1102	1152					634	389	187	208	315	276
KM										310		
390										308		
380										300		
370										286	403	
360										265	403	
350										239	398	
340										207	388	417
330										170	371	417
320										127	350	411
310												
300							1096		298	74.0	323	398
290		1341					1095	754	296	29.1	292	376
280	1290	1334					1077	752	288		257	347
270	1287	1301					1026	731	272		211	311
260	1266	1243					949	689	251		150	257
250	1221	1161					865	620	225		86.7	188
240	1164	1050					721	516	194		12.4	108
230	1083	914					570	378	155		57.8	
220	963	764					376	227	99.4		4.9	
210	821	622					116	47.6	26.9			
200	667	508										
190	528	430										
180	418	374										
170	344	327										
160	290	286										
150	249	247										
140	212	209										
130	178	169										
120	157	150										
110	143	88.1										

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

28 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	5	5	A4	4	4	3	3	3	4	4	4	2
HMIN	219	199	199	283	299	228	202	210	110	108	109	108
SCAT	32.0	31.8	38.2	53.7	46.4	54.5	32.3	40.0	40.3	46.6	43.8	51.0
HMAXF	280	256	260	388	384	336	261	273	254	275	276	286
SHMAX	148	115	69	117	98	145	81	223	601	855	1165	1362
KM												
390				161	161							
380				160	160							
370				156	157							
360				150	150							
350				140	138							
340				128	123	198						
330				114	105	198						
320				96.2	84.9	194						
310				78.2	61.7	187						
300				59.6	12.4	177						
290	362			38.8		164						
280	362					147						
270	352		148			126	193	476		1084	1669	1634
260	324	292	148			101	193	465	1004	1055	1615	1529
250	280	289	145			76.5	188	438	1002	1004	1522	1442
240	205	272	137			52.2	172	400	975	929	1390	1302
230	103	245	128			12.4	149	335	922	831	1206	1155
220	12.4	194	109				114	205	828	716	962	979
210		110	81.1				64.4	12.4	678	599	720	807
200		12.4	12.4						495	486	538	647
190									334	392	407	503
180									223	319	325	393
170									165	264	271	321
160									128	217	230	269
150									104	178	195	232
140									92.3	151	164	198
130									85.1	127	143	169
120									76.0	117	133	152
110									12.4	91.4	80.1	119

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

28 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QzKP	A2	82	1	1	A1	A1	1	1	3	F3	F3	F2
HMIN	106	106	110	110			202	199	200	206	228	
SCAT	41.7	49.7	57.5	45.1			35.9	38.7	58.7	49.2	48.2	
HMAXF	271	287	309	286			278	281	295	316	340	
SHMAX	1156	1183	1387	1175			481	388	224	227	233	
KM												
350											335	
340											335	
330											332	
320											335	321
310			1473								334	302
300			1464								310	326
290			1341	1426	1555			754	309	311	244	
280	1654	1335	1368	1550			1004	754	305	291	208	
270	1654	1304	1293	1510			993	740	296	261	172	
260	1624	1245	1198	1430			942	699	282	225	135	
250	1547	1151	1088	1320			855	635	265	179	94.9	
240	1432	1047	956	1161			725	546	243	131	57.0	
230	1251	934	813	983			556	425	214	90.0	12.4	
220	1063	818	678	797			338	268	174	59.6		
210	838	707	558	625			122	124	121	26.8		
200	618	603	460	489								
190	458	508	390	388				12.4	12.4			
180	359	423	337	310								
170	298	351	290	257								
160	251	289	250	215								
150	205	247	212	180								
140	174	208	172	155								
130	159	177	153	139								
120	151	164	137	128								
110	137	128	12.4	12.4								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

29 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _{KP}	F2	F2	F2	A2	2	3	3	3	2	A2	2	1
HMIN	239		208	216	238	248	224	209	108	109	108	110
SCAT	41.3		26.6	84.3	56.3	50.5	42.0	32.5	42.3	33.4	40.5	46.6
HMAXF	319		263	372	348	349	316	263	263	255	269	280
SHMAX	167		113	221	135	162	177	214	635	810	971	1162
KM												
380				198								
370				198								
360				197								
350				195	179	240						
340				191	178	238						
330				186	175	232						
320	310			179	168	220	304					
310	306			173	158	204	302					
300	293			166	146	184	292					
290	270			156	131	158	274					
280	240			142	114	126	247				1514	
270	199	310		125	93.1	90.0	212	560	960		1420	1497
260	144	309	109	70.7	57.4	169	539	959	1446	1403	1444	
250	72.8	291	92.9	49.0	12.4	122	519	939	1440	1343	1363	
240	12.4	250	75.2	12.4		76.2	474	892	1377	1243	1234	
230		189	56.2			40.6	399	819	1245	1093	1071	
220		113	24.1				275	705	1055	894	873	
210		30.0					570	785	685	688		
200							427	555	518	536		
190							302	389	411	426		
180							227	295	338	354		
170							178	237	286	306		
160							142	196	243	269		
150							118	165	202	236		
140							101	141	165	198		
130							91.8	125	144	165		
120							84.6	115	133	149		
110							32.2	55.6	67.3	12.4		

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

29 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _{KP}	A1	A1	B2	2	2	A3	3	3	2	2	2	A3
HMIN	106	109	107	109	109	209	200	204	221	204	200	207
SCAT	45.3	62.1	53.1	54.7	50.0	42.5	37.4	37.3	51.6	33.8	49.5	35.7
HMAXF	278	294	283	298	290	292	275	292	322	297	298	281
SHMAX	1113	1240	976	1159	956	625	401	332	351	228	258	140
KM												
330										524		
320										524		
310										516		
300		1328		1290		1143		634	498	446	403	
290		1327	1096	1283	1191	1142		633	473	442	400	286
280	1446	1312	1095	1255	1180	1121	794	616	435	419	390	286
270	1435	1279	1079	1199	1145	1065	790	579	389	375	370	279
260	1389	1228	1042	1133	1091	982	761	514	327	315	344	261
250	1301	1169	985	1042	1004	860	700	427	249	248	308	233
240	1186	1084	914	928	895	712	621	326	160	179	260	192
230	1037	956	828	804	768	502	521	223	71.1	120	196	143
220	857	801	731	676	632	197	385	115		70.8	120	90.2
210	682	648	634	556	500	12.4	208	50.9		38.8	61.2	38.7
200	541	523	541	457	389		12.4			4.1		
190	441	430	451	377	305							
180	366	366	368	314	242							
170	313	320	297	264	193							
160	272	279	244	227	159							
150	240	238	201	196	134							
140	201	199	172	173	118							
130	167	163	153	151	108							
120	152	149	135	130	100							
110	131	65.5	112	49.0	49.0							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

30 NOV 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _{KP}	3	3	2	2	2	1	1	1	A2	2	2	2
HMIN	219	230	200	200	266	268	228	219	109	109	108	107
SCAT	37.0	41.3	42.8	40.6	67.9	49.8	47.8	38.5	41.2	41.8	30.6	41.5
HMAXF	297	312	277	282	404	369	327	288	271	274	260	278
SHMAX	141	166	155	97	145	131	137	250	793	915	909	1177
KM												
410					156							
400					156							
390					155							
380					151							
370					146	193						
360					139	192						
350					131	186						
340					122	177						
330					110	165	208					
320		304			95.7	148	207					
310		304			81.1	126	202					
300	280	298			66.8	99.8	191					
290	277	282		174	53.8	72.7	178	532				
280	264	259	286	174	41.6	49.5	159	526	1240	1328	1669	
270	241	226	284	170	12.4	12.4	133	502	1240	1326	1655	
260	208	181	274	161			106	465	1220	1293	1669	1594
250	166	127	257	145			79.9	307	1163	1221	1628	1488
240	112	69.5	233	126			54.5	285	1069	1119	1492	1334
230	64.6	1.2	199	102			12.4	138	936	958	1277	1135
220	12.4		148	74.8				750	770	960	892	
210			82.2	50.2				546	583	672	686	
200								376	439	494	522	
190								273	346	372	411	
180								208	284	303	334	
170								165	235	254	281	
160								135	195	215	240	
150								111	160	180	205	
140								84.5	133	155	177	
130								89.7	121	140	157	
120								80.4	114	132	147	
110								38.9	55.6	97.9	106	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

30 NOV 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _{KP}	2	2	4	4	4	6	6	6	6	6	6	8
HMIN	108	108	108	108	109	209	218	209	200	208	231	200
SCAT	42.2	58.6	53.3	50.3	44.0	34.8	39.3	38.8	52.4	44.9	49.0	50.9
HMAX	264	273	282	292	289	289	308	291	314	312	327	292
SHMAX	908	903	941	1023	990	577	615	553	429	285	305	154
KM												
330											492	
320										608	446	490
310										607	446	478
300				1143			1143					
290			1050	1142	1341	1215	1083	1096	597	419	427	235
280			993	1049	1125	1328	1197	1000	1074	544	389	377
270	1240	992	1036	1085	1280	1128	881	1017	502	347	303	224
260	1237	980	1005	1024	1193	1011	731	921	448	295	217	211
250	1205	953	956	940	1080	835	549	772	378	241	139	196
240	1138	918	887	841	937	633	320	572	299	184	72.8	175
230	1039	880	799	732	768	385	123	359	213	121	147	
220	897	782	699	623	603	136	26.9	139	130	72.6		115
210	736	690	597	531	473	12.4		12.4	64.8	24.6		76.0
200	583	591	505	460	369				3.7			1.2
190	461	494	428	400	292							
180	384	406	362	346	234							
170	329	337	312	296	188							
160	285	290	272	247	152							
150	246	250	235	205	129							
140	209	210	199	175	116							
130	185	185	178	165	108							
120	168	166	156	135	01							
110	116	134	114	78.1	55.6							

RAMEY AFB, PUERTO RICO		AVERAGE ELECTRON DENSITY										KP BELOW 4.5		NOV 1960				
		60 W										60 W		NOV 1960				
		RAMEY AFB, PUERTO RICO										60 W		NOV 1960				
TIME		0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100					
COUNT		23	22	23	23	21	23	23	24	21	22	22	21	21				
KP		2.5	2.5	2.7	2.7	2.6	2.4	2.4	2.4	2.5	2.5	2.5	1.8	1.8				
HMIN		221	220	218	213	249	251	246	205	109	109	108	108	108				
RATIO		6.1	6.9	7.2	6.3	4.4	5.5	7.3	5.2	4.7	5.2	4.2	4.1	4.7				
SCAT		43.2	37.3	36.6	48.5	65.0	58.1	49.5	36.6	43.1	42.0	42.7	46.5	46.5				
HMAX		403	352	307	212	183	176	205	625	1207	1659	1905	1826	1826				
HMAXF		210	296	288	300	372	360	338	278	270	274	277	282	282				
SHMAX		223	172	146	131	157	133	130	286	808	1125	1335	1395	1395				
SHFNE		1359	1165	1013	730	674	629	708	2049	4214	5805	6709	6547	6547				
KM		950	27.0	22.0	18.8	13.9	16.9	15.1	15.6	35.8	66.7	93.3	109	107				
		900	34.6	28.2	24.2	21.7	19.3	20.1	45.9	85.6	120	140	137	137				
		850	44.4	36.2	31.0	22.8	27.8	24.8	25.7	58.9	110	154	180	176				
		800	56.9	46.5	39.7	29.3	35.6	31.7	43.0	75.6	141	197	231	226				
		750	72.9	59.5	50.9	37.5	45.5	40.6	42.2	96.9	181	253	296	289				
		700	93.2	76.2	65.2	47.9	57.9	51.8	53.9	124	231	324	378	370				
		650	119	97.2	83.2	61.7	73.3	65.8	68.6	159	296	414	484	473				
		600	151	124	106	77.6	92.0	82.9	86.9	202	377	527	616	602				
		550	190	156	134	97.7	114	103	109	256	478	668	781	763				
		500	237	195	167	122	137	126	134	322	602	840	981	958				
		490	247	204	175	127	142	131	140	336	629	878	1026	1001				
		480	258	213	182	132	146	136	145	351	658	918	1071	1045				
		470	268	222	190	137	151	141	151	367	687	958	1118	1091				
		460	279	231	198	143	155	145	156	382	717	1000	1167	1138				
		450	290	240	206	148	159	150	162	399	748	1043	1216	1185				
		440	301	250	214	154	163	154	167	415	779	1086	1266	1234				
		430	311	259	222	159	166	158	172	432	811	1130	1317	1283				
		420	322	268	230	165	169	162	177	449	843	1175	1369	1333				
		410	333	278	238	170	171	165	182	466	876	1220	1421	1382				
		400	343	287	246	175	173	169	187	483	909	1265	1472	1432				
		390	353	296	254	180	173	171	191	500	942	1310	1524	1481				
		380	362	305	261	185	173	173	194	516	974	1355	1574	1529				
		370	371	313	269	189	172	174	197	532	1006	1398	1624	1576				
		360	378	321	275	193	170	174	200	548	1037	1440	1671	1621				
		350	385	328	282	196	166	172	201	563	1066	1480	1717	1663				
		340	390	334	287	198	161	168	200	577	1094	1518	1759	1702				
		330	394	339	291	200	154	162	198	589	1120	1553	1797	1737				
		320	395	342	293	201	143	153	193	603	1144	1583	1831	1767				
		310	393	343	294	201	132	141	184	609	1164	1610	1859	1792				
		300	385	340	292	199	120	126	169	616	1181	1631	1880	1810				
		290	370	333	287	196	108	108	151	621	1193	1645	1894	1820				
		280	345	320	278	189	94.3	86.1	131	621	1199	1650	1895	1817				
		270	308	298	262	180	78.6	65.3	107	611	1195	1637	1870	1785				
		260	256	265	241	167	63.7	45.8	78.6	583	1173	1593	1806	1716				
		250	191	223	209	140	46.6	28.9	50.1	528	1124	1506	1691	1604				
		240	128	167	167	127	29.1	14.4	26.0	434	1045	1370	1520	1447				
		230	71.7	99.6	119	99.6	15.2	5.2	14.1	291	930	1183	1297	1255				
		220	31.1	39.9	64.5	68.5	10.1	2.1	7.4	134	777	953	1043	1031				
		210	10.2	8.9	19.7	37.4	7.0	1.4	3.3	38.1	608	725	797	816				
		200	.9	.5	1.6	.7	.5	.7	16.6	449	540	598	632	632				
		190							11.5	321	411	458	490	490				
		180							8.7	233	324	366	391	391				
		170							6.9	178	263	302	327	327				
		160							5.7	141	216	255	279	279				
		150							5.2	117	180	216	239	239				
		140							4.5	103	153	184	205	205				
		130							1.2	94.6	136	160	178	178				
		120							87.0	81.0	126	146	163	163				
		110							41.1	41.1	72.1	102	118	118				

RAYEY AFB, PUERTO RICO	AVERAGE ELECTRON DENSITY												KP BELOW 4.0					
	60 W												NOV 1960					
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100						
COUNT	23	22	23	23	21	23	23	21	22	22	21	21						
KP	2.5	2.5	2.7	2.7	2.6	2.4	2.4	2.4	2.5	2.5	2.5	2.5						
HMW	221	220	218	213	249	251	246	205	109	109	108	108						
PATIO	6.1	6.9	7.2	6.3	4.4	4.8	5.5	7.3	5.3	5.2	5.1	4.7						
SSCAT	43.2	37.3	36.6	48.5	65.0	58.1	49.5	36.6	43.1	42.0	42.7	46.5						
NMAX	403	352	307	212	183	176	205	625	1207	1659	1905	1826						
HMAXF	310	296	288	300	372	360	338	278	270	274	277	282						
SHWAX	223	172	146	131	157	133	130	286	808	1125	1335	1395						
SHINE	1359	1165	1013	730	674	629	708	2049	4214	5805	6709	6547						
KM																		
950	27.0	22.0	18.8	13.9	16.9	15.1	15.6	35.8	66.7	93.3	109	107						
900	34.6	28.2	24.2	17.8	21.7	19.3	20.1	45.9	85.6	120	140	137						
850	40.0	34.4	36.2	31.0	22.8	27.8	24.8	25.7	58.9	110	154	180						
800	56.9	46.5	30.7	29.1	35.6	31.7	33.0	75.6	141	197	231	226						
750	72.9	59.5	50.9	37.9	45.5	40.6	42.2	96.9	181	253	296	289						
700	93.2	76.2	65.2	47.9	57.9	51.8	53.9	124	231	324	378	370						
650	119.9	97.2	83.2	61.1	73.3	65.8	68.6	159	296	414	484	474						
600	151	124	106	77.6	92.0	82.9	86.9	202	377	527	616	602						
550	190	156	134	97.7	114	103	109	256	478	668	781	763						
500	237	195	167	122	137	126	134	322	602	840	981	958						
490	247	204	175	127	142	131	140	336	629	878	1026	1001						
480	258	213	182	132	146	136	145	351	658	918	1071	1045						
470	268	222	190	137	151	141	151	367	687	958	1118	1091						
460	279	231	198	143	155	145	156	382	717	1000	1167	1185						
450	290	240	206	148	159	150	162	399	748	1043	1216	1318						
440	301	250	214	154	163	154	167	415	779	1086	1266	1234						
430	311	259	222	159	166	158	172	432	811	1130	1317	1283						
420	322	268	230	165	169	162	177	449	843	1175	1369	1333						
410	333	278	238	170	171	165	182	466	876	1220	1421	1382						
400	343	287	246	175	173	169	187	483	909	1265	1472	1432						
390	353	296	254	180	173	171	191	500	942	1310	1524	1481						
380	362	305	261	185	173	173	194	516	974	1355	1574	1529						
370	371	313	269	189	172	174	197	532	1006	1398	1624	1576						
360	378	321	275	193	170	174	200	548	1037	1460	1671	1621						
350	385	328	282	196	166	172	201	563	1066	1480	1717	1663						
340	390	334	287	198	161	168	200	577	1094	1518	1759	1702						
330	394	339	293	201	154	162	198	589	1120	1553	1797	1737						
320	395	342	293	201	143	153	193	600	1144	1583	1831	1767						
310	393	343	294	201	132	141	184	609	1164	1610	1859	1792						
300	385	340	292	199	120	126	169	616	1181	1631	1880	1810						
290	370	333	287	196	108	108	151	621	1193	1650	1894	1820						
280	345	320	278	189	94.3	86.1	131	621	1199	1650	1895	1817						
270	308	298	262	180	78.6	65.3	107	611	1195	1637	1870	1785						
260	256	265	241	167	63.7	45.8	78.6	583	1173	1593	1806	1716						
250	191	223	209	150	46.6	28.9	50.1	528	1124	1506	1691	1604						
240	128	167	167	127	29.1	14.4	26.0	434	1045	1370	1520	1447						
230	71.7	99.6	61.9	9.6	15.2	5.2	14.1	291	930	1183	1297	1255						
220	31.1	39.9	64.5	68.5	10.1	2.1	7.4	134	777	953	1043	1031						
210	10.2	8.9	19.7	37.4	7.0	1.4	3.3	38.1	608	725	797	816						
200	.9		.5	1.6	.7			16.6	449	540	598	632						
190								11.5	321	411	458	490						
180								8.7	233	324	366	391						
170								6.9	178	263	302	327						
160								5.7	141	216	255	279						
150								5.2	117	180	216	239						
140								4.5	103	153	184	205						
130								1.2	94.6	136	160	178						
120								87.0	126	146	163							
110								41.1	72.1	102	118							

ELECTRON DENSITY

1 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q_KP		6	6	6			B6	6	4	4		
HMIN	105	108	108	A8	108			203	221	209	248	261
SCAT	60.1	50.9	57.7	59.4	66.7			50.3	42.8	31.4	48.2	44.9
CHMAXF	314	310	321	331	321			304	322	302	358	348
CHMAXA	2127	1869	1931	1975	1942			741	428	255	279	247
367												275
350										417		
340				2032						414	417	
330				2032	2031	2000		716		382	400	
320	2243		2031	2013	2000			716		353	376	
310	2240	2161	2012	1966	1987		1119	701	477	314	344	
300	2212	2141	1961	1887	1951		1117	666	476	265	296	643
290	2150	2020	1960	1887	1951		1096	613	458	211	237	642
280	2056	1970	1768	1649	1817		1049	542	397	156	168	621
270	1938	1828	1624	1494	1718		986	445	355	103	100	572
260	1788	1648	1455	1328	1586		894	342	307	58.7		486
250	1598	1436	1254	1166	1427		774	237	254	12.4		346
240	1382	1214	1068	993	1252		641	139	196			784
230	1148	1016	893	820	1037		477	63.0	138			10.2
220	723	613	742	669	819		306	82.7				
210	771	679	615	545	653		135	12.4				
200	634	559	512	441	505							
190	524	464	431	359	382							
180	433	388	366	291	288							
170	358	326	314	240	220							
160	299	277	270	200	175							
150	257	235	232	168	145							
140	225	196	199	142	124							
130	195	168	171	126	110							
120	173	154	153	117	102							
110	149	129	109	94.3	54.0							

ELECTRON DENSITY

2 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q ₁ KP	3	A3	3	A3	4	A2	2	2	2	2	2	2
HMIN	107	108		109	107	113	205	199	203	201	234	207
SCAT	474.3	544.3		524.4	544.9	654.5	434.2	384.6	544.1	544.7	474.6	454.6
HMAX	279	320		303	307	315	305	284	326	300	330	297
SHMAX	1261	1870		1585	1473	1536	933	598	533	310	220	200
KM												
2302		2032							716		348	
320		2013				1669			701		345	
310		2013		1907	1669	1666	1569		714		333	
290		1873		1907	1662	1545	1564		676	446	314	335
280		1873		1879	1630	1605	1521	1096	639	443	287	333
260	1555	1764		1818	1570	1544	1434	1093	589	432	253	324
270	1542	1598		1719	1475	1463	1305	1061	522	414	211	306
260	1493	1402		1591	1362	1366	1140	989	445	391	160	284
250	1406	1202		1426	1225	1250	932	887	368	356	96.7	147
240	1290	1067		1227	1076	1092	697	756	274	309	46.6	194
230	1140	848		994	895	923	442	606	189	249		137
220	985	706		798	718	736	213	446	118	181		82.9
210	831	594		632	576	549	58.0	237	60.9	109		38.7
200	685	499		480	465	391		52.8				
190	552	423		383	376	269						
180	445	360		307	306	188						
170	363	306		254	251	142						
160	303	260		214	209	115						
150	257	217		183	176	97.1						
140	219	176		156	150	84.3						
130	194	159		140	130	78.3						
120	175	171		132	119	72.6						
110	161	122		65.5	38.5							

ELECTRON DENSITY

RAMEY AFR, PUERTO RICO 60 W 3 DEC 1960

[illegible]

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 4 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QxP	2	2	2	2	A2	A1	A1	A1	A1	1	3	3
HMW	108	110	108	109	109		202	206	202	257	231	209
SCAT	55.7	56.7	57.1	52.5	70.4		53.5	41.9	72.7	57.8	39.2	39.1
HMAX	299	306	296	297	324		309	285	325	370	315	285
SHMAX	1415	1421	1335	1185	1474		871	405	429	341	234	204
KM												
370										446		
360										443		
350										433		
340										416		
330					1420				492	392		
320					1419				492	362	446	
310		1528			1406		1303		487	326	445	
300	1492	1523	1466	1341	1380		1293		477	285	430	
290	1482	1496	1442	1335	1338		1260	745	463	234	401	403
280	1448	1446	1416	1306	1277		1202	742	445	175	359	397
270	1383	1371	1369	1252	1211		1134	722	422	93.6	296	378
260	1306	1280	1297	1168	1134		1017	681	395	33.6	220	350
250	1202	1152	1210	1070	1019		845	617	360		123	299
240	1078	1019	1093	953	884		660	530	308		59.6	224
230	950	868	963	819	744		420	415	322			136
220	820	721	815	689	608		216	271	138			69.3
210	700	588	673	573	490		80.0	99.1	62.6			12.4
200	593	477	551	478	402							
190	502	393	454	390	333							
180	425	333	382	335	278							
170	364	289	324	280	234							
160	314	251	277	233	196							
150	270	216	238	193	165							
140	229	190	204	159	140							
130	193	175	178	141	123							
120	170	165	166	133	114							
110	132	40.2	127	65.5	49.0							

ELECTRON DENSITY

5 DEC 1960

[illegible]

5 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,KP	A2	A2	A3	B3	3	A1	A1	1	A1	F1	F1	F3
HM1N					109	110	208	212	212	282	286	221
5CAT					51.7	51.8	48.3	47.8	61.4	57.5	48.2	31.6
HMAXF					304	288	319	317	332	399	393	303
SHMAX					1448	1012	726	487	357	368	315	278
KM												
470										474	477	
390										471	476	
380										460	467	
370										442	449	
360										417	417	
350										386	378	
340									443	349	333	
330									443	308	277	
320							1072	754	439	259	209	
310					1669		1064	750	430	201	128	608
300					1666		1050	729	413	122	69.5	606
290					1637	1240	978	692	392	57.5	26.8	583
280					1578	1233	900	642	364			527
270					1481	1203	802	564	331			445
260					1360	1150	680	474	291			343
250					1217	1072	553	367	240			228
240					1072	975	418	251	185			120
230					907	860	280	146	125			60.3
220					740	741	135	69.4	60.7			
210					600	620	26.9					
200					477	494						
190					377	372						
180					306	270						
170					258	193						
160					222	147						
150					194	121						
140					173	105						
130					158	94.1						
120					147	86.7						
110					55.6	12.4						

ELECTRON DENSITY

6 DEC 1960

[illegible]

6 DEC 1960

[illegible]

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

7 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q ₁ KP	4	4	2	A2	A2	A3	3	3	A4	4	S4	2
HMIN	218	204	211	215	237	237	248	209	109	110	110	111
SCAT	45.4	29.4	29.8	53.0	74.7	70.8	53.9	42.7	41.6	41.8	51.1	46.8
HMAXF	308	268	275	310	385	382	363	299	278	287	297	287
SHMAX	277	144	107	142	152	157	161	306	800	1439	1694	1478
KM												
300					149	161						
380					149	161						
370					148	160	216					
360					145	157	215					
350					140	152	213					
340					134	147	206					
330					128	138	195					
320				214	120	130	182					
310	477			214	111	119	164					
300	473			211	101	106	142	540		2128		
290	458			206	89.5	93.4	118	534		2144	2118	1953
280	431		262	196	78.1	80.9	90.9	514	1107	2129	2070	1942
270	395	362	261	184	66.9	68.2	68.0	481	1097	2054	1979	1880
260	340	356	246	168	55.6	55.5	48.4	430	1050	1923	1859	1778
250	263	320	218	144	43.8	43.2	12.4	358	979	1722	1682	1644
240	164	282	172	104	12.4	12.4		273	886	1454	1460	1465
230	82.7	211	114	63.5				166	773	1101	1197	1255
220	23.7	120	57.5	31.4				80.0	648	816	940	999
210		50.4						12.4	521	591	721	765
200									404	441	558	589
190									309	351	424	453
180									236	289	337	360
170									184	238	281	299
160									147	197	234	251
150									122	167	195	207
140									108	145	168	176
130									99.1	136	154	164
120									78.6	127	145	158
110									41.3	12.4	12.4	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

7 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q ₁ KP	2	2	5	5	5	86	6	6	5	5	5	A5
HMIN	108	108	108	110	110		198	207	218	214	229	208
SCAT	57.0	56.7	55.1	61.8	69.3		52.5	52.1	60.0	46.5	51.1	46.7
HMAXF	293	316	317	312	333		330	308	362	323	352	320
SHMAX	1425	1611	1645	1617	1760		967	745	626	386	416	326
KM												
370										745		
360										745		573
350										737		573
340										720		565
330						1612				690	599	546
320						1611		1341		651	598	514
310						1654	1771	1669	1596	1330		492
300	1569	1620	1729	1653	1597			1294	1167	605	587	475
290	1568	1565	1665	1617	1442			1232	1160	548	561	422
280	1548	1480	1568	1558	1362			1150	1130	482	525	359
270	1504	1375	1449	1474	1270			1038	1085	405	470	292
260	1434	1246	1301	1372	1175			893	1011	325	398	224
250	1346	1102	1160	1251	1070			727	902	242	317	161
240	1232	955	994	1126	953			545	749	164	235	104
230	1094	813	828	986	832			380	549	98.2	157	61.4
220	958	684	683	832	711			231	340	57.0	92.0	104
210	810	577	554	674	591			128	138	12.4	47.5	58.3
200	651	497	454	534	484			65.3	41.8			12.4
190	509	432	382	422	386			12.4				
180	401	381	323	336	304							
170	328	335	275	279	241							
160	279	291	236	235	198							
150	239	248	203	199	165							
140	197	210	174	171	140							
130	175	181	157	154	124							
120	164	165	148	137	113							
110	129	127	88.8	12.4	12.4							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

8 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q ₁ KP	5	5	4	4	4	4	4	4	53	3	3	2
HMIN	269	259	230	219	266	237	248	209	108	109	108	109
SCAT	48.5	45.3	40.6	44.1	74.4	60.5	42.8	43.0	53.4	44.5	59.0	48.6
HMAXF	373	354	292	302	432	372	362	300	301	289	304	293
SHMAX	275	299	332	149	250	232	160	340	1009	1490	1855	1661
KM												
440					240							
430					240							
420					238							
410					235							
400					229							
390					221							
380	413				210	274						
370	412				198	274						
360	405	500			183	271						
350	389	499			167	264	266					
340	364	488			148	253	266					
330	331	464			129	240	259					
320	289	430			108	222	245					
310	238	381			262	88.4	201	227	1215		2032	
300	182	313	716	262	71.1	176	201	608	1215		2029	2096
290	126	235	714	258	55.0	149	169	600	1202	2096	2001	2094
280	73.9	137	700	247	41.7	120	132	576	1168	2072	1945	2060
270	12.4	71.4	660	228	12.4	91.3	95.0	539	1112	1991	1853	1974
260		12.4	603	204		67.2	59.2	479	1035	1872	1740	1859
250			511	171		47.0	12.4	389	937	1686	1599	1692
240			283	124		12.4		283	816	1443	1427	1470
230			49.6	65.7				164	677	1186	1231	1206
220				12.4				76.4	539	928	1037	943
210								12.4	416	685	837	745
200									322	492	664	593
190									246	344	519	486
180									192	284	401	406
170									151	227	319	346
160									123	182	263	297
150									104	149	222	257
140									94.6	128	189	222
130									89.9	121	164	189
120									85.2	115	150	170
110									48.9	55.6	90.0	120

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

8 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q ₁ KP	2	2	A1	A1	A1	A2	A2	A2	A2	A2	2	F4
HMIN	109	105	109	110			200	207	207	228	249	229
SCAT	68.3	52.5	53.5	65.0			53.4	42.4	41.9	51.8	50.5	41.9
HMAXF	320	310	314	314			315	289	303	338	358	318
SHMAX	1887	1777	1824	1726			1066	537	315	292	294	196
KM												
360												417
350												415
340												405
330												385
320	1741	2032	2033	1771			1542			405	357	335
310	1733	2032	2029	1769			1538		540	386	323	332
300	1706	2013	1997	1751			1510		539	362	286	320
290	1657	1958	1930	1712			1456	1004	527	328	243	296
280	1588	1859	1819	1649			1369	993	499	286	194	265
270	1506	1728	1682	1570			1261	952	458	237	137	226
260	1407	1569	1515	1470			1129	888	398	181	73.2	183
250	1292	1379	1325	1345			954	782	326	117	12.4	134
240	1173	1128	1111	1188			689	637	239	63.2		83.0
230	1042	915	919	1021			424	449	158	12.4		134
220	901	749	750	857			201	201	90.3			
210	768	615	614	683			77.8	44.2	35.0			
200	649	511	510	537			2.0					
190	544	435	433	421								
180	453	373	369	334								
170	376	322	316	273								
160	313	276	272	228								
150	264	235	234	191								
140	223	200	202	163								
130	197	179	170	143								
120	185	169	168	134								
110	128	151	141	12.4								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 9 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OxKP	F4	F3	3	A3	A4	A4	A4	4	4	4	3	
HMIN	252	230	212	199	199	269	238	110	110	108	107	
SCAT	43.8	41.0	40.5	86.8	61.9	52.5	45.4	45.9	45.9	32.1	52.6	
HMAXF	338	316	290	378	319	365	325	284	298	275	286	
SHMAX	155	167	201	240	147	104	267	946	1565	1382	1685	
KM					193							
300					193		152					
360					191		152					
350					188		149					
340	268				184		143					
330	266				178		134	446				
320	255				170	176	125	445				
310	240		298		162	175	111	435				
300	218		286		152	172	93.2	412	2161			
290	186		265	389	142	167	72.5	379	1328	2144	2112	
280	147		238	383	131	159	50.0	338	1326	2076	2294	2106
270	101		204	366	120	148	6.6	286	1299	1956	2281	2065
260	55.8		162	338	109	136		223	1240	1796	2174	1980
250			111	296	98.6	122		143	1152	1548	1942	1872
240			61.2	239	80.0	106		30.0	1027	1251	1651	1715
230			4.1	149	70.5	88.8		869	989	1334	1502	
220				63.6	60.7	71.2		690	726	1055	1264	
210					58.1	51.6		505	542	791	958	
200					12.4	5.3		363	413	589	725	
190								271	326	440	544	
180								205	259	347	425	
170								162	211	287	349	
160								133	172	242	291	
150								113	141	202	247	
140								102	126	173	209	
130								87.7	120	158	181	
120								76.6	114	149	169	
110								12.4	12.4	119	147	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 9 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OxKP	A3	A3	A4	A4	A4	3	3	3	3	3	3	3
HMIN	105					208	214	199	199	219	230	238
SCAT	59.8					61.0	44.5	35.2	44.1	52.5	51.5	46.2
HMAXF	308					338	313	295	304	328	333	344
SHMAX	1686					1270	925	604	428	338	292	250
KM												389
350												432
340						1528						388
330						1522				477		380
320						1496	1555			474		362
310	1741					1449	1554		652	463		336
300	1733					1374	1522	1143	650	442		300
290	1701					1285	1452	1137	631	413		253
280	1640					1182	1339	1090	600	376		201
270	1563					1059	1192	997	552	331		146
260	1457					915	992	871	493	277		95.3
250	1330					744	748	713	427	216		57.1
240	1181					567	474	539	354	152		68.8
230	1032					391	210	361	278	75.1		3.2
220	884					246	71.4	212	202	12.4		
210	743					55.7		104	117			
200	622							17.4	12.4			
190	513											
180	415											
170	328											
160	268											
150	227											
140	198											
130	179											
120	169											
110	149											

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 10 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OxKP	3	3	1	1	F1	2	2	2	2	52	52	2
HMIN	271	248	218	200	346	260	236	219	110		110	109
SCAT	50.1	33.4	27.0	19.0	63.0	54.8	61.9	42.0	44.3		37.5	43.4
HMAXF	368	320	270	234	468	367	360	306	283		272	264
SHMAX	266	235	222	97	117	101	138	249	913		1261	1183
KM												
470					139							
460					139							
450					136							
440					132							
430					127							
420					120							
410					112							
400					101							
390					86.6							
380					70.3							
370	410				55.3	137	163					
360	408				42.2	136	163					
350	397				12.4	133	162					
340	178					128	159					
330	354	524				120	154					
320	318	524				111	146					
310	268	512				98.6	136	446				
300	208	476				85.6	124	444				
290	149	417				71.5	110	431	1341			
280	69.8	325	679			55.9	94.9	404	1340	1907		
270		214	679			40.9	78.5	366	1315	1906	1741	
260		116	654			62.1	312	1255		1860	1737	
250		26.9	584			46.9	241	1164		1741	1696	
240			416	420		16.8	163	1030		1558	1604	
230			163	416			83.0	845		1335	1477	
220			30.0	367			12.4	638		1080	1289	
210				219				461		848	1020	
200				12.4				330		655	739	
190								242		498	530	
180								187		390	403	
170								147		318	332	
160								119		267	286	
150								103		227	247	
140								94.3		196	211	
130								89.6		175	185	
120								84.9		161	169	
110								12.4		12.4	76.1	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 10 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OxKP	2	A2	A3	A3	3	2	2	2	1	1	F1	1
HMIN	110	110			112	200	204	200	201	238	248	229
SCAT	56.2	58.3			54.6	69.6	59.5	44.7	59.3	51.0	54.0	50.6
HMAXF	282	303			300	341	326	273	314	350	360	326
SHMAX	1179	1343			1333	1410	1255	514	259	221	253	218
KM												
360										310	348	
350						1555				310	345	
340						1555				307	337	
330						1545	1669			298	320	329
320						1519	1664		333	282	300	328
310		1341				1476	1639		332	261	274	321
300		1340			1555	1413	1590		328	234	241	307
290	1277	1325			1544	1339	1516		319	202	201	287
280	1277	1290			1505	1247	1430	960	305	166	157	262
270	1262	1234			1440	1146	1310	959	288	129	108	227
260	1223	1156			1349	1020	1142	940	265	91.9	62.5	184
250	1165	1066			1226	859	922	897	236	58.7	12.4	135
240	1095	966			1095	676	642	834	201	12.4		83.6
230	1004	863			942	485	354	729	162			12.4
220	902	758			787	277	147	575	119			
210	798	657			626	94.9	55.3	360	65.5			
200	695	569			480			40.2				
190	599	490			370							
180	500	420			286							
170	396	362			231							
160	315	313			192							
150	262	271			163							
140	217	231			141							
130	187	186			124							
120	170	169			113							
110	83.8	12.4										

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

11 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	
HMAXF	F1	1	2	2	F2	2	2	53	53	53	3	3	
HMVN	231	211	201	199	236	227	233	209	110	109	109	108	
SCAT	37.8	46.7	32.6	49.9	82.1	81.2	66.0	45.0	57.3	48.6	46.2	57.4	
HMAXF	314	300	259	281	392	373	356	288	287	297	278	288	
SMMAX	166	242	119	105	157	130	139	240	715	1292	1261	1366	
KM													
400					143								
390					143								
380					143	123							
370					141	123							
360					138	122	161						
350					134	121	160						
340					129	118	158						
330					122	115	154						
320	323				114	110	149						
310	421				106	106	141						
300	311	417			96.8	97.9	132						
290	288	413			170	87.3	90.5	122	439	834	1631	1555	
280	256	399			170	77.4	82.7	108	436	831	1589	1741	1548
270	210	376			168	66.8	73.8	90.8	422	816	1509	1729	1516
260	153	345	298		162	55.7	64.3	71.8	399	788	1405	1676	1462
250	89.4	296	291		153	44.3	54.3	53.6	366	746	1256	1576	1378
240	48.6	215	271		142	16.2	43.0	31.0	312	695	1095	1448	1274
230		118	241		127				225	631	871	1270	1154
220		57.6	174		105				108	555	679	1026	994
210			75.0		73.0				12.4	467	526	790	823
200					12.4					380	416	590	661
190										292	332	441	513
180										210	271	346	400
170										146	224	284	328
160										112	188	237	282
150										94.7	159	199	240
140										83.5	135	167	200
130										78.3	123	144	168
120										73.2	116	134	152
110										12.4	74.4	65.5	83.3

ELECTRON DENSITY

RAMEY AFR, PUERTO RICO

60 W

11 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q ₁ KP	3	3	53	A3	3	A3	A3	A3	3	3	3	3
HMIN	109	108	109		108	110	218	208	203	204	232	206
SCAT	70.7	56.1	54.0		52.7	45.0	45.7	47.6	40.5	32.7	37.0	52.4
HMAXF	304	314	312		281	273	308	328	299	281	310	325
SHWAF	1513	1577	1593		1206	795	533	442	323	201	156	202
KM												
330								643				274
310		1626	1756					639			304	273
320	1433	1623	1755				875	621			304	268
280	1132	1600	1734				868	587	573		298	257
290	419	1549	1682		1542		840	542	566	439	280	242
280	1392	1476	1595		1542	1096	791	482	560	439	252	222
270	1350	1376	1485		1525	1095	721	413	498	427	213	197
260	1293	1247	1347		1481	1074	630	339	437	393	166	167
250	1231	1114	1201		1405	1023	521	263	357	340	115	135
240	1142	985	1050		1300	950	396	180	265	266	62.5	105
230	1041	823	884		1180	858	242	109	167			135
220	925	690	727		1023	751	52.0	59.6	92.6	96.3		50.7
210	804	580	583		836	631		12.4	50.0	46.2		17.2
200	669	499	462		630	503						
190	549	435	376		449	377						
180	444	382	320			314	268					
170	361	334	278			235	187					
160	301	289	241		193	137						
150	257	253	201		162	109						
140	225	229	168		137	91.1						
130	192	197	154		127	80.1						
120	171	160	145			72.8						
110	129	113	46.8		52.0							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

12 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q-KP	3	F3	F2	F2	F2	F3	F3		3	3	3	3
HMIN	258	241	209	200	277	271	269	215	110	110	110	110
SCAT	57.9	53.5	31.9	34.0	43.5	57.6	59.3	46.1	42.3	49.4	38.9	70.9
HMAX	370	347	277	259	350	384	374	294	263	279	277	301
SHMAX	199	319	203	112	56	117	151	327	618	1035	1119	1440
KM						152						
360						152	198					
370		262				150	198					
360	260				102	145	195					
350	255	461			102	137	190					
340	245	459			101	127	182					
330	231	450			96.2	116	170					
320	215	430			89.0	103	156					
310	193	405			80.6	89.3	140					1433
300	165	372			68.3	73.0	119	573				1433
290	131	329			51.8	55.9	91.7	572				1425
280	94.2	273	477		18.1	37.4	61.3	500		1341	1654	1403
270	56.7	201	471				12.4	533	960	1330	1641	1366
260	12.4	118	443	262				493	959	1291	1575	1312
250		57.1	392	258				440	936	1224	1654	1251
240			320	241				359	887	1138	1278	1173
230			218	215				252	811	1007	1051	1074
220			89.8	174				101	688	846	832	944
210			12.4	114					522	674	633	797
200									395	525	494	645
190									287	403	395	504
180									291	318	326	383
170									154	255	272	304
160									122	209	228	257
150									102	171	192	216
140									91.1	141	167	182
130									82.9	124	145	161
120									75.1	116	133	148
110									12.4	12.4	40.2	12.4

ELECTRON DENSITY

RAMEY AFR, PUERTO RICO

60 W

12 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OXFP	3	3	54		54	A4	4			4		4
HMIN	110	109	109		A10	299	208	219	209	213	220	210
SCAT	56.0	54.2	56.2		49.6	44.5	49.8	48.4	56.2	55.2	52.2	47.8
HMAX	310	308	321		286	305	319	328	322	332	339	334
SHMAX	1395	1529	1587		1277	824	871	606	552	379	338	326
KM												
340										508	477	469
320			1654					917	754	508	473	468
310	1446	1669	1638			1341	1229	885	746	487	439	437
300	1436	1659	1597			1338	1193	836	725	462	410	406
290	1402	1623	1524		1669	1305	1131	772	690	430	372	368
280	1345	1559	1429		1662	1208	1044	693	647	393	319	319
270	1257	1468	1309		1623	1135	937	584	591	344	256	262
260	1160	1352	1176		1549	1005	810	459	518	287	191	201
250	1037	1026	1028		1438	858	671	330	429	219	129	150
240	902	1057	881		1300	683	521	201	322	152	80.2	106
230	772	894	743		1156	483	373	95.2	201	94.5	48.3	72.0
220	658	735	623		948	228	212	12.4	97.1	51.2	7	45.5
210	561	597	519		727	12.4	54.3		12.4			24.2
200	485	480	430		528							
190	425	406	376		474							
180	377	345	323		279							
170	336	299	279		220							
160	294	260	241		181							
150	249	228	208		152							
140	207	199	182		131							
130	179	167	166		121							
120	154	151	151		114							
110	12.4	84.4	49.0		12.4							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 13 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
O.K.P	4	4	4	4	4	3	3	3	53	3	3	1
HMIN	218	211	207	216	226	226	236	217	108	108	108	107
SCAT	57.6	41.7	28.8	35.7	73.8	65.2	42.1	50.2	46.3	40.2	45.5	50.7
HMAXF	143	306	259	282	370	365	326	307	284	273	269	262
SHMAX	390	393	147	113	177	162	127	291	824	1198	1065	1012
KM												
370					179	179						
360					178	179						
350	508				176	177						
340	507				172	173						
330	501				166	166	219					
320	487				158	158	218					
310	444	716			149	147	211	477				
300	437	712			139	135	199	475				
290	399	690		249	127	120	181	464	1119			
280	349	647		249	113	104	155	443	1117	1907		
270	287	583		241	97.9	88.3	123	417	1091	1904	1446	1341
260	221	488	417	225	81.9	72.2	88.0	377	1037	1857	1431	1341
250	154	353	407	200	65.5	56.8	57.4	312	965	1749	1381	1322
240	102	212	374	155	49.0	42.6	23.7	218	869	1592	1290	1277
230	60.7	108	312	94.2	17.1	12.4		106	743	1355	1171	1205
220	12.4	56.6	166	43.6				36.8	598	1025	1023	1115
210			62.1						463	760	845	979
200									342	528	668	801
190									250	363	503	593
180									187	275	381	430
170									147	219	305	331
160									119	180	255	273
150									101	149	214	229
140									91.2	126	180	189
130									82.1	112	157	161
120									67.8	104	141	152
110									60.1	90.6	114	136

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 13 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
O.K.P	1	1	1	1	A1	1	1	A1	0	0	0	1
HMIN	109	109	109	110	109	110	201	200	219	248	224	221
SCAT	56.6	58.7	46.3	59.3	55.7	57.2	40.8	37.5	54.1	39.9	43.7	53.6
HMAXF	292	307	298	306	298	299	293	272	316	334	310	323
SHMAX	1170	1380	1353	1493	1209	1033	663	351	247	157	191	162
KH												
340										286		
330										285		
320										362	276	
310		1433		1669						360	258	335
300	1240	1429	1669	1664	1420	1240	1191			353	232	331
290	1240	1405	1657	1639	1413	1232	1189			340	197	318
280	1226	1360	1609	1580	1383	1206	1160	716		320	154	296
270	1193	1288	1518	1513	1329	1161	1091	716	296	106	267	172
260	1141	1205	1394	1421	1256	1098	994	697	263	61.6	225	149
250	1070	1102	1229	1300	1156	1014	865	652	218	12.4	166	119
240	979	965	1013	1162	1036	902	693	583	158		101	88.6
230	876	829	836	987	870	779	480	480	93.2		48.4	57.2
220	766	702	678	783	728	637	261	353	12.4			
210	681	592	552	688	571	485	98.5	200				
200	569	502	458	436	442	356		12.4				
190	482	429	393	342	342	255						
180	403	367	345	280	266	177						
170	337	313	306	240	211	130						
160	286	267	271	213	171	106						
150	246	230	238	177	138	89.0						
140	207	202	204	152	116	73.4						
130	168	170	172	134	106	63.9						
120	152	153	150	120	98.3	55.8						
110	130	110	51.4	12.4	12.4	12.4						

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 14 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
O.K.P	1	1	2	2	2	3	3	3	2	2	2	2
HMIN	242	252	228	213	204	199	237	208	110	108	109	108
SCAT	61.8	47.7	43.2	31.3	21.0	95.1	57.5	30.5	31.1	36.2	43.8	29.2
HMAXF	379	348	319	281	242	354	342	265	245	249	257	236
SHMAX	200	167	154	130	59	128	101	170	513	715	784	739
KM												
380	229											
370	228											
360	224					108						
350	215	262				108	135					
340	204	261				107	135					
330	191	254				106	134					
320	175	241	262			105	130					
310	157	223	259			102	124					
300	136	199	249			99.4	117					
290	114	166	232	304		95.6	108					
280	92.9	127	209	304		91.1	97.1					
270	73.5	85.9	177	294		86.6	81.9	446				
260	55.9	47.7	136	269		81.6	65.1	443				
250	36.4		94.9	229	219	75.7	47.9	418	960	1191	1055	
240			60.2	167	218	69.4	12.4	371	954	1172	1027	1446
230		12.4		102	199	62.3		284	905	1108	966	1429
220			50.6	159	54.0			145	807	999	879	1332
210				68.6	44.1		30.0	651	834	766	1156	
200					7.3			474	640	644	859	
190								335	455	511	574	
180								246	331	407	397	
170								186	258	328	317	
160								146	213	265	270	
150								121	179	217	237	
140								104	153	181	207	
130								93.6	132	149	177	
120								86.3	120	135	156	
110								12.4	102	58.9	134	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 14 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
O.K.P	2	2	A1	1	A1	A1	A1	1	3	3	A3	3
HMIN	106	108	100	110	109			200	201	220	239	319
SCAT	55.2	57.8	46.9	51.7	51.8			44.3	46.2	48.9	52.7	47.8
HMAXF	256	283	299	295	277			287	297	316	339	413
SHMAX	774	886	1032	1179	962			487	242	213	181	154
KM												
420												240
410												240
400												236
390												226
380												210
370												190
360												165
350												136
340											260	101
330											258	63.4
320										335	252	12.4
310										334	240	
300			1240	1446					389	326	223	
290		875	1229	1443				834	387	310	203	
280		874	1189	1417	1240			829	376	290	178	
270		864	1121	1364	1234			805	356	261	149	
260	896	841	1026	1287	1205			757	328	218	112	
250	893	802	898	1185	1153			691	290	164	67.3	
240	876	754	755	1033	1081			604	241	110	12.4	
230	842	693	612	850	977			492	183	59.4		
220	799	629	497	663	841			350	124	4.1		
210	716	570	412	510	674			189	69.5			
200	657	514	356	401	507			12.4				
190	573	463	314	331	382							
180	485	415	279	282	287							
170	402	370	245	243	228							
160	334	318	207	206	187							
150	282	264	177	171	156							
140	242	229	162	147	132							
130	201	192	153	137	120							
120	174	157	145	129	112							
110	154	137	49.0	12.4	62.8							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

15 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QARP	3		3		F3		4		6		6	5
HMW	305	242	199	200	277	257	280	249	108	110	109	108
SCAT	57.3	39.6	38.4	57.4	74.2	59.1	61.0	38.9	40.5	49.9	44.7	54.9
HMAX	424	322	275	289	414	368	388	318	293	285	275	293
SWMAX	225	209	222	89	152	111	141	215	962	1398	1441	1810
430	286											
420	285				156							
410	281				156							
400	273				155							
390	260				152		179					
380	243				148		178					
370	222				142	143	175					
360	196				135	143	170					
350	168				127	140	162					
340	138				117	135	152					
330	105	410			106	128	140					
320	70.5	410			93.0	119	125	446				
310	34.0	400			78.4	108	106	442				
300					63.1	96.0	83.5	423	1446			2277
290					66.7	80.4	57.3	390	1444	1907		2275
280			446	126	12.4	62.3	4.1	341	1410	1902	2161	2244
270		208	444	174		44.8		263	1330	1864	2155	2175
260		119	420	119		12.4		148	1214	1788	2103	2065
250		55.3	397	112				12.4	1042	1681	1995	1926
240			352	105					837	1527	1843	1733
230			280	97.3					625	1296	1620	1477
220			195	84.9					454	1020	1286	1192
210			86.2	64.1					339	724	876	901
200			12.4						256	507	594	647
190									201	377	434	466
180									161	293	344	362
170									132	236	287	308
160									110	196	244	268
150									93.7	166	208	231
140									82.9	142	177	196
130									77.9	126	153	168
120									73.0	115	136	153
110									53.4	12.4	68.6	120

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q.FKP	5	A5	A5	A5	A6		6	6	6	6	6	
H.MIN	108	109	109			219	261	212	239	231	212	
SCAT	58.6	58.9	58.9			56.5	52.6	49.9	45.0	49.6	67.7	
HMAX	300	324	310			340	324	327	340	326	334	
SIMAX	1619	1947	1812			1331	855	607	515	545	465	
KM						1727					565	
340						1713	1191	875	814	865	564	
330	1969					1672	1189	871	783	862	559	
320	1966					1593	1170	850	734	843	547	
310	1940		2016			1499	1128	809	665	802	527	
300	1786	1879	2002			1383	1068	753	581	750	506	
290	1773	1798	1959			1250	981	681	477	680	477	
280	1734	1689	1812			1105	870	592	352	582	434	
270	1669	1550	1775			902	734	487	230	457	376	
260	1579	1388	1647			672	593	370	114	282	299	
250	1465	1220	1498			440	427	261	12.4	117	210	
240	1314	1076	1321			206	271	150			116	
230	1134	928	1119			12.4	162	74.6			56.4	
220	916	788	908				77.4					
210	725	662	807									
200	583	545	616									
190	484	448	383									
180	416	363	304									
170	362	302	253									
160	302	259	215									
150	246	224	186									
140	203	194	161									
130	171	167	144									
120	152	152	131									
110	126	73.0	58.6									

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

16 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q K P	6			5			5		5	4		C2
H M I N	258	229	207	246	269	215	201	218	110	108	109	
SCAT	52.0	38.7	42.7	57.7	44.2	48.8	30.2	51.8	32.1	39.2	44.7	
H M A X F	375	308	294	160	168	301	248	328	266	275	274	
S H M A X F M	521	390	288	305	241	277	31	252	776	1147	1199	
380	745											
370	743			410	386							
360	730			410	383							
350	699			407	370							
340	657			397	346							
330	606			381	314			362				
320	541			363	272			359				
310	454	814		334	225	469		351				
300	340	805	508	294	175	460		395				
290	229	768	507	245	123	464		316				
280	126	710	493	189	67.3	448		286		1786	1771	
270	67.0	608	466	127	12.4	422		247	1555	1780	1768	
260	12.4	446	427	71.5		389		203	1540	1725	1730	
250		228	369	26.2		338	83.8	148	1455	1603	1647	
240		90.0	293			256	82.3	97.7	1316	1436	1539	
230		12.4	206			142	76.2	57.0	1059	1219	1353	
220			113			55.3	66.4	12.4	719	955	1120	
210			38.7				53.1		414	684	835	
200									257	501	587	
190									174	378	404	
180									126	287	297	
170									98.0	228	230	
160									84.1	187	183	
150									79.6	156	144	
140									75.3	133	127	
130									70.4	120	121	
120									59.4	110	115	
110										58.7	65.5	

ELECTRON DENSITY

RAMEY AFR. PUERTO RICO

16 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _{AP}	C2	C2	1	A1	1	A2	A2	2	A1	1	1	2
H _{MIN}			107	110	108	205	200	205	219	226	220	219
SCAT			55.1	54.4	60.6	40.9	48.6	49.1	44.3	33.9	33.8	49.2
H _{MAX}			307	307	312	311	298	295	326	295	282	302
SH _{MAX}			1760	1639	1515	1044	869	487	389	280	216	170
K _M												
330					1654	1555			643			
320									640			
310			2032	1907	1654	1555			621			280
300			2023	1894	1654	1535	1393	794	586	643		276
290			1981	1850	1599	1484	1384	792	537	639	500	280
280			1907	1773	1535	1396	1347	776	465	610	499	266
270			1793	1672	1458	1281	1274	742	370	555	483	250
260			1655	1528	1355	1143	1180	695	267	461	449	231
250			1478	1351	1213	972	1054	628	164	315	384	202
240			1250	1176	1051	781	864	537	96.7	163	286	158
230			1019	983	874	526	648	403	50.2	66.6		98.0
220			788	765	716	275	394	250	5.8		12.4	12.4
210			612	588	557	65.8	1	87.4				
200			488	455	429							
190			403	356	332							
180			347	293	261							
170			303	234	209							
160			262	195	170							
150			224	163	142							
140			189	139	123							
130			163	125	110							
120			149	117	103							
110			121	12.4	12.1							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO												
60 W 17 DEC 1960												
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	2	2	A3	A3	A3	2	2	F2	2	2	2	1
HMIN	226	228	237	230	274	228	221	209	110	110	109	108
SCAT	49.1	39.3	31.5	48.9	51.1	46.1	46.2	38.6	41.6	37.6	42.5	56.9
HMAXF	318	315	292	319	387	326	303	279	271	263	257	264
SHMAX	139	109	83	97	136	137	138	214	715	1002	986	905
KM												
390					189							
380					188							
370					183							
360					174							
350					162							
340					147							
330					129	214						
320	219	198			143	109	213					
310	217	198			142	87.0	207	242				
300	212	192	210		138	67.9	196	242				
290	201	179	210	131	50.4	180	236					
280	187	161	203	120	24.9	160	225	446	1143			
270	168	135	186	108		134	210	440	1143	1756		1096
260	143	103	158	90.7		107	190	420	1124	1753	1555	1094
250	112	72.7	108	71.0		80.1	160	386	1069	1703	1545	1078
240	69.4	47.0	38.7	48.0		50.4	105	333	988	1598	1494	1045
230	26.8	7.5		1.1		12.4	56.3	250	849	1435	1395	996
220								119	663	1110	1253	929
210								12.4	489	788	1074	834
200									348	504	840	721
190									242	336	564	604
180									167	251	335	470
170									124	201	256	328
160									98.2	162	210	263
150									85.0	132	172	220
140									79.6	115	138	175
130									74.9	107	123	143
120									68.0	101	115	135
110									12.4	40.2	86.6	116

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO												
60 W 17 DEC 1960												
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	A1	1	2	2	A2	A2	2	A2	A3	3	3	4
HMIN	110	109	108				201	208	240	241	219	217
SCAT	92.0	38.0	39.1				46.0	39.1	53.3	35.8	33.1	57.4
HMAXF	286	284	271				292	281	339	305	279	338
SHMAX	1060	1216	1064				511	293	264	179	121	143
KM												
340									389			179
330									386			178
320									376			174
310									360	403		168
300							875		339	401		159
290							874	608	308	385		146
280							1211	1782	1669			
270							1186	1731	1668			
260							1137	1615	1638			
250							1065	1454	1553			
240							978	1233	1410			
230							884	1018	1212			
220							779	770	962			
210							663	582	718			
200							548	442	511			
190							445	350	376			
180							360	296	286			
170							288	255	232			
160							232	220	185			
150							191	176	160			
140							157	158	143			
130							140	150	135			
120							132	138	128			
110							12.4	55.6	89.3			

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO												
60 W 18 DEC 1960												
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	4	4	5	5	5	5	5	H3	3	A3	A4	
HMIN	276	255	218	212	210	277	205	249	109	110	110	109
SCAT	51.3	60.3	34.1	31.0	35.7	56.6	58.7	47.9	42.8	35.4	36.4	67.5
HMAXF	391	392	286	260	296	377	312	342	282	273	257	291
SHMAX	174	202	170	75	116	65	68	192	882	1230	1024	1218
KM												
400	240	240										
390	240	240										
380	237	238				90.4						
370	230	232				90.0						
360	218	223				88.3						
350	201	210				85.1		304				
340	181	195				79.9		304				
330	156	177				74.2		299				
320	130	155				67.1	90.4	288				
310	103	131				58.5	90.4	270				
300	76.4	103				224	48.3	89.5	247			1191
290	51.4	78.6	389			227	33.5	87.3	214	1341		1191
280	17.4	59.0	386			210	7.1	83.8	172	1340	2144	1182
270		43.6	368	189	193		77.2	125	1314	2141		1161
260		15.7	333	184	166		70.5	75.9	1251	2074	1786	1124
250			282	170	132		63.1	12.4	1154	1927	1769	1077
240			196	146	95.4		55.4		1011	1684	1687	1017
230			90.1	109	64.0		47.4		813	1307	1541	942
220			24.6	57.0	42.2		37.2		601	948	1320	858
210							12.4		425	652	1074	767
200									298	452	730	673
190									220	338	447	573
180									172	266	301	478
170									138	220	239	391
160									114	185	194	310
150									97.6	157	153	254
140									89.2	136	130	209
130									77.6	123	122	170
120									63.4	115	116	152
110									12.4	12.4	49.6	97.2

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO								60 W			18 DEC 1960		
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
QzKP		4				A4	A3	A3	A3	3	3	F3	
HMIN	109	112	110	110					228	254	229	203	
SCAT	41.5	60.4	42.0	49.3					52.6	34.7	38.2	51.4	
HMAXF	285	322	303	300					328	331	302	307	
SHMAX	1144	1559	1407	1605					382	318	399	322	
KM													
340										679			
330		1555							557	679			
320		1555							553	663		348	
310		1541	1792						539	617	834	477	
300		1505	1789	2096					513	546	833	474	
290		1555	1448	1746	2075				480	444	812	464	
280		1549	1370	1648	2005				439	300	760	443	
270		1503	1274	1494	1897				384	165	684	416	
260		1407	1149	1315	1754				316	59.7	568	377	
250		1269	1027	1136	1565				240		385	328	
240		1101	898	943	1344				149		148	266	
230		911	771	781	1057				32.2		12.4	192	
220		721	652	637	787							115	
210		565	548	522	571							50.3	
200		451	461	427	415							54.4	
190		372	385	361	322							12.4	
180		313	323	320	263								
170		262	271	283	218								
160		217	225	244	181								
150		194	195	204	156								
140		177	178	172	141								
130		167	168	154	134								
120		155	148	140	125								
110		100		12.4	12.4								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

19 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z FP	3	F3	A3	A3	3	4	4	53	3	3	3	3
HMIN	217	210	201	207	245	262	209	200	109	110	110	109
SCAT	40.2	41.4	23.1	76.1	57.6	58.8	44.4	35.7	35.2	42.9	41.8	50.9
HMAXF	309	294	243	365	381	390	297	269	259	265	259	276
SHMAX	255	304	105	225	148	154	142	181	564	929	856	1120
KM												
400						189						
390						177	189					
380						177	187					
370					216	176	183					
360					215	171	176					
350					213	164	167					
340					210	154	156					
330					204	142	140					
320					196	127	121					
310	477				186	110	99.3					
300	471	565			175	93.4	78.7	240				
290	450	564			162	77.4	60.3	239				
280	418	549			148	62.9	46.2	232				
270	365	517			132	50.1	24.6	218	392			
260	286	470			115	37.5		200	385	917	1415	1240
250	183	404	362	97.3	12.4			175	364	901	1377	1227
240	108	317	360	79.1				139	329	848	1300	1179
230	64.3	190	331	60.5				99.1	273	759	1195	1093
220	19.9	82.8	271	45.6				62.6	197	629	1018	976
210			144	12.4				12.4	95.7	494	783	831
200										379	553	660
190										289	381	512
180										220	287	390
170										174	232	295
160										139	192	243
150										115	162	208
140										98.1	140	177
130										90.0	124	152
120										80.4	115	134
110										49.0	12.4	103

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

19 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z FP	53	H3	A3	A3	A3	A4	A4	A4	4	4	F4	F4
HMIN		109					202	202	201	207	235	269
SCAT		41.8					41.7	37.4	39.0	54.2	35.7	47.2
HMAXF		281					281	277	292	312	342	357
SHMAX		1232					699	328	329	260	211	188
KM												
360											304	
350											310	302
340											310	293
330											301	277
320											362	280
310											361	256
300											357	216
290	1669						1393				607	346
280	1668						1393	661	594	329	202	95.6
270	1639						1370	655	558	307	179	12.4
260	1562						1299	626	506	277	130	
250	1436						1201	578	432	242	78.1	
240	1253						1047	497	338	200	36.2	
230	1074						74.9	392	240	152		
220	869						384	281	136	96.2		
210	685						117	124	64.8	36.8		
200	538											
190	438											
180	368											
170	316											
160	277											
150	242											
140	213											
130	187											
120	150											
110	49.0											

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

20 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z FP	F4	A4	A3	A3	3	A4	A4	4	53	3	3	A3
HMIN	236	220	229	210	221		257	238	109	108	108	109
SCAT	43.6	31.0	41.8	38.6	34.6		42.8	52.2	30.7	39.7	38.9	55.8
HMAXF	342	283	325	299	288		334	331	265	256	266	290
SHMAX	306	203	227	192	141		60	206	599	779	1076	1145
KM												
350	500											
340	500							109	310			
330	490							108	310			
320	467							106	306			
310	432							100	297			
300	383							91.6	281			
290	321	508	320	354	310			81.3	261			
280	246	507	277	337	306			66.6	235			
270	168	485	226	310	290			47.0	202	1096		
260	103	418	164	268	262			12.4	162	1089	1240	1657
250	64.1	356	101	213	221				97.8	1032	1234	1595
240	25.6	223	55.7	150	160				24.6	919	1192	1476
230		91.7	5.3	88.9	72.9				753	1110	1306	933
220				50.0					549	990	1108	783
210									387	832	844	639
200									283	633	605	513
190									218	437	442	411
180									174	298	329	330
170									143	232	270	263
160									118	192	231	218
150									100	157	194	181
140									89.9	128	155	156
130									77.9	111	125	142
120									65.7	104	119	134
110									44.7	94.0	112	114

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

20 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z FP	A3	A3	A5	A5	A5	A4	4	A4	5	55	5	3
HMIN							109	200	209	238	256	229
SCAT							58.4	48.1	40.7	47.1	48.0	44.2
HMAXF							299	290	296	345	357	324
SHMAX							1344	585	261	238	236	254
KM												
360											362	
350											362	359
340											360	350
330											352	331
320											335	305
310											310	272
300												
290							1555	960	477	278	234	407
280							1547	960	474	237	188	379
270							1516	949	457	192	135	331
260							1462	917	425	144	75.9	26.1
250							1378	866	381	91.3	28.1	179
240							1282	791	317	53.7		101
230							1162	683	242	12.4		56.0
220							1007	536	151			5.3
210							827	369	74.6			
200							624	194	12.4			
190							468	12.4				
180							348					
170							268					
160							220					
150							185					
140							159					
130							137					
120							122					
110							111					
							49.0					

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 21 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	A3	A3	F2	F2	A2	F2	F2	2	S3	S3	A3	A4
HMIN	271	238	217		296		252	219	110	109		109
SCAT	47.8	46.2	34.6		61.7		50.7	33.8	32.2	31.3		49.9
HMAXF	368	337	284		403		353	302	254	252		270
SHMAX	247	287	384		76		93	156	593	643		831
KM												
410					97.2							
400					97.2							
390					96.2							
380					93.9							
370	389				90.4							
360	386				85.6		135					
350	375				79.3		135					
340	365	477			72.6		133					
330	328	474			63.9		128					
320	291	461			53.7		119					
310	239	436			42.1		110	362				
300	182	401			12.4		97.0	361				
290	123	354	85.4				82.9	350				
280	64.7	289	85.2				67.1	324				
270		191	818				51.2	283			1038	
260		105	753				30.8	214	1143	1240	1029	
250		58.3	656					119	1138	1238	996	
240		12.4	520					12.4	1086	1191	945	
230			310						981	1082	875	
220			70.4						805	890	779	
210									577	630	662	
200									389	430	536	
190									255	288	432	
180									182	225	347	
170									143	175	280	
160									117	137	229	
150									101	117	187	
140									91.1	108	164	
130									82.6	103	154	
120									65.1	98.1	146	
110									12.4	12.4	103	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 21 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	A4	A4	A4	A4	A4	A5	A5	A5	A	A	A	A
HMIN									219	255	231	208
SCAT									50.8	44.5	40.5	47.3
HMAXF									345	354	314	308
SHMAX									283	255	244	261
KM												
360										417		
350										389	416	
340										388	406	
330										381	386	
320										366	356	446
310										344	313	445
300										316	259	433
290										277	199	405
280										233	134	366
270										185	74.0	315
260										140	34.0	248
250										102		171
240										69.0		83.2
230										44.7		113
220										2.8		61.4
210												12.4

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 22 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	S4	4	4	4	F4	4	S4	4	S3	S3	3	3
HMIN	221	201	201	270		255	207	209		108	109	109
SCAT	45.7	30.9	21.6	50.1		52.7	41.3	41.0		31.1	40.6	43.1
HMAXF	323	265	242	352		369	292	287		261	274	270
SHMAX	254	202	61	66		129	112	206		724	1107	1066
KM												
370							174					
360							173					
350							169					
340							161					
330	410						149					
320	409						135					
310	401						119					
300	382						101	198				
290	353						82.7	198	389			
280	317						64.2	194	386			
270	269	508					47.1	185	372			
260	207	504					169	346		1341	1618	1481
250	139	477	219				148	311		1303	1520	1415
240	82.9	425	218				120	257		1187	1380	1320
230	47.5	339	203				89.4	187		1020	1174	1180
220		187	168				57.9	105		782	905	1004
210		72.9	85.8				19.3	12.4		538	667	806
200										362	498	618
190										274	371	471
180										219	297	355
170										179	252	292
160										145	215	250
150										123	183	214
140										110	161	183
130										105	135	154
120										99.3	120	136
110										75.0	92.6	99.9

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 22 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	3	A3	3	A3	3	A4	A4	4	A3	A3	3	3
HMIN	109	109	110	110	109			199		242	227	234
SCAT	43.1	58.1	48.6	47.6	50.3			60.5		44.1	39.8	40.2
HMAXF	280	311	288	270	279			309		330	322	317
SHMAX	1154	1417	1138	1071	891			212		207	176	192
KM												
330										362	310	
320										357	310	362
310										344	303	359
300										321	285	345
290	1555	1507	1446							291	258	319
280	1555	1448	1437	1433	1143					258	246	222
270	1534	1365	1398	1420	1135					247	185	178
260	1471	1271	1327	1376	1104					233	105	127
250	1372	1132	1233	1300	1049					212	52.4	83.8
240	1238	960	1097	1201	974					184		94.0
230	1030	786	941	1051	877					151		17.5
220	833	627	760	869	752					113		
210	658	497	589	665	607					69.8		
200	515	405	445	492	475					12.4		
190	412	342	349	375	358							
180	342	294	289	295	271							
170	292	253	249	244	214							
160	254	211	214	209	174							
150	222	171	178	181	144							
140	196	151	152	157	121							
130	162	139	139	140	109							
120	138	132	131	129	102							
110	121	70.2	12.4	12.4	55.6							

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60 W

23 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	3	3	A3	F3	F3	A3	3	3	54	4	4	A2
HMIN	210	215	200		268	238	233	212	108	108	109	110
SCAT	32.4	35.8	37.0		57.2	54.3	39.7	41.7	34.2	32.0	48.0	38.8
HMAXF	275	278	252		380	337	311	284	250	244	247	269
CHMAXF	153	183	72		108	96	86	203	433	596	617	762
FM												
390					139							
380					139							
370					138							
360					135							
350					129							
					121							
330					112	134						
320					99.3	132	161					
310					86.0	126	161					
300					72.4	118	158					
290					57.5	110	149	410				
280		362	417		43.0	97.2	135	409				
270		359	412		8.5	83.1	117	398				1061
260		342	392	170		66.9	93.9	377	774			1046
250		307	355	170		48.9	66.9	347	774	1096	906	995
240		254	300	165		12.4	41.7	284	754	1091	902	914
230		172	205	155				169	704	1040	878	802
220	82.1	58.9	140					68.5	619	938	836	662
210			116						488	771	772	524
200			12.4						346	560	678	408
190									242	381	530	339
180									173	281	346	297
170									130	226	252	267
160									102	190	204	240
150									88.1	160	158	206
140									81.1	134	135	167
130									76.8	118	124	143
120									72.5	104	117	134
110									53.6	76.9	78.9	71.4

ELECTRONIC SENSITIVITY

60 W

23 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q-KP	2		A2	2		A2	A2		2	2	F2	F3
HMIN	110	109		108			200	207	216	239	227	209
SCAT	34.6	54.4		40.4			40.3	36.4	37.4	38.5	40.9	41.9
HMAXF	278	293		259			268	280	299	318	327	326
GMAXF	979	1224		839			328	151	136	147	205	235
KM												
330											310	368
320										286	309	366
310										283	301	350
300		1420							262	271	287	326
290		1418						310	258	249	266	296
280	1528	1398					310	245	219	241	261	
270	1505	1354				679	304	222	173	209	217	
260	1414	1278		1740		673	286	190	120	170	166	
250	1272	1190		1226		647	258	148	68.3	119	121	
240	1059	1076		1174		602	214	103	124.4	65.9	86.3	
230	812	921		1084		529	160	62.0		19.9	60.0	
220	609	761		954		416	94.4	25.1			41.7	
210	458	605		788		221	38.7				4.5	
200	371	480		620								
190	317	389		473			12.4					
180	281	325		356								
170	253	279		284								
160	229	240		237								
150	190	197		205								
140	167	173		175								
130	144	158		148								
120	133	151		135								
110	12.4	117		114								

ELECTRON SENSITIVITY

60 W

24 DEC 1960

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CELLULOSE POLYMER

60 W

24 DEC 1960

[illegible]

ELECTRON DENSITY

RAMEY AFB, RUERTO RICO

60 W

27 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QVAF	F4	F4	5	5	5	5	5	5	5	5	5	A6
HMIN	279	252	207	185	268	215	249	200	110	109	108	
SCAT	58.2	48.2	32.0	32.1	47.2	44.2	50.4	38.8	42.3	41.5	40.5	
HMAXF	386	347	276	236	350	290	339	257	253	256	273	
SHMAX	283	258	239	125	95	70	129	152	512	687	783	
KM												
390	382											
380	381											
370	375											
360	363				156							
350	345	410			156							
340	323	408			155		198					
330	295	397			149		197					
320	257	375			141		191					
310	210	347			131		182					
300	153	311			116	125	169					
290	80.5	263			94.2	125	153					
280	12.4	198	565		65.7	124	130				1096	
270		123	560		21.7	119	100				1094	
260		57.0	530			111	64.2	335	824	1096	1067	
250			477			101	12.4	333	823	1089	1008	
240			377	342		86.9		320	805	1053	913	
230			257	339		65.9		296	762	986	793	
220			111	320		33.1		263	700	881	642	
210			36.8	289				205	603	707	510	
200				223				12.4	456	502	408	
190				58.8					313	343	332	
180									210	260	276	
170									153	210	230	
160									120	171	189	
150									99.6	136	152	
140									89.7	115	131	
130									78.1	107	120	
120									65.5	101	111	
110									12.4	82.9	97.6	

ELECTRON DENSITY

RAMEY AFB. RUERTO RICO

60 W

27 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q*KR	A6	A6	6	6								F3
HMIN			110	110			208	196	229	228	240	
<SAT			49.1	49.1			43.8	47.7	44.4	48.9	52.5	
HMAX			298	295			287	278	320	311	345	
CHMAX			1912	1493			915	404	396	246	227	
KM												
350											335	
340											335	
330									698		329	
320									697	410	316	
310									688	410	297	
300			2465	1831					659	405	273	
290			2449	1826			1669		616	392	243	
280			2362	1788			1657	679	552	370	205	
270			2243	1697			1604	675	460	341	161	
260			2088	1585			1504	656	337	298	95.9	
250			1876	1445			1371	620	182	243	12.4	
240			1590	1267			1174	571	84.6	156		
230			1274	1061				891	500	12.4	32.2	
220			977	871				489	419			
210			739	709			81.0	291				
200			567	575				131				
190			443	462								
180			367	372								
170			314	303								
160			273	252								
150			240	211								
140			209	175								
130			181	148								
120			166	135								
110			12.4	12.4								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

28 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OXAP	F3	F3	3	3	F5	F5	5	4	4	4	A4	
HWIN	229	213	199	201	269	239	199	200	110	108	108	107
SCAT	40,8	37,7	45,6	65,7	67,8	48,3	62,4	29,7	43,7	40,2	36,1	39,9
HMAX	26	274	275	308	307	328	313	257	260	249	255	260
SHMAX	265	296	262	117	166	140	185	155	504	702	879	985
KM												
400					193							
390					193							
380					185							
370					190							
360					177							
350					166							
340					153							
330	469				139	224						
320	467				123	222	229					
310	452			143	104	215	229					
300	423			143	87,5	203	227					
290	381			141	61,9	187	211					
280	320	670	477	137	42,7	167	211					
270	249	668	475	131	3,9	142	199					1446
260	165	645	463	124		107	185	417	764		1446	1446
250	98,8	599	460	117		65,0	169	412	755	1096	1438	1423
240	55,2	529	406	108		12,4	150	384	725	1083	1374	1354
230	5,3	403	359	98,0			128	333	680	1035	1255	1235
220		145		286	75,6		97,1	240	593	956	1057	1080
210			162	50,2			58,2	97,8	979	829	831	879
200							4,5		364	669	623	686
190			12,4						274	507	465	523
180									203	373	365	417
170									152	280	301	343
160									114	222	254	287
150									91,7	183	218	247
140									81,3	154	187	215
130									76,2	133	158	178
120									70,8	120	139	149
110									12,4	97,6	127	130

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

28 OEC 1960

[illegible]

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO													60 W	29 DEC 1960
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100		
Q _z KP	3	3	4	A4	A4	3	3	3	2	2	2	A5		
HMIN	253	259	205	200		246	247	200	110	109	110	112		
SCAT	48.2	46.8	28.0	22.3		75.4	54.9	41.7	35.5	38.0	38.2	38.2		
HMAXF	352	348	262	230		378	344	271	246	244	258	263		
SHMAX	157	179	148	75		99	95	195	483	604	785	990		
KM														
380						102								
370						102								
360	240					101								
350	240	298				98.7	135							
340	236	296				95.7	135							
330	227	287				91.9	133							
320	213	272				87.1	128							
310	194	252				81.2	122							
300	170	221				74.5	114							
290	141	177				67.0	104							
280	109	124				58.6	89.3	389						
270	74.5	71.8	410			49.9	71.3	389			1555			
260	42.4	12.4	410			40.7	48.2	382			1215	1554		
250		393				12.4	12.4	364	875	1004	1203	1513		
240		352						338	868	1002	1151	1416		
230		275	310					296	827	971	1061	1269		
220		150	295					218	756	906	911	1054		
210		51.9	255					104	636	806	742	789		
200			40.2						466	656	569	587		
190									318	480	429	444		
180									217	347	344	361		
170									152	256	282	302		
160									115	196	233	259		
150									93.9	156	189	223		
140									82.0	126	140	189		
130									75.6	110	124	156		
120									67.0	102	117	134		
110									12.4	72.1	12.4			

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO													60 W	29 DEC 1960
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300		
Q _z KP	5	5	3	3	3	A2	A2	2	2	2	2	4		
HMIN	109	109	109	109	107	108	190	199	208	228	263	250		
SCAT	50.1	58.9	54.9	49.0	47.5	43.9	40.2	43.5	52.2	48.8	52.0	49.7		
HMAXF	283	302	313	300	289	272	254	294	310	329	357	351		
SHMAX	1226	1418	1693	1519	1425	1234	474	293	230	203	182	191		
KM														
360												274	286	
350												273	286	
340												267	282	
330												310	255	273
320			1907									308	241	257
310		1500	1905							335	299	220	236	
300		1500	1880	1907					500	332	283	191	210	
290	1446	1485	1823	1888	1907				499	323	261	154	176	
280	1445	1449	1729	1829	1891	2032			487	308	233	115	137	
270	1422	1387	1611	1728	1834	2031			460	288	198	59.3	96.7	
260	1369	1313	1463	1594	1733	1996	960		424	260	156			55.9
250	1286	1206	1270	1415	1597	1909	958		368	225	109			
240	1178	1083	1070	1211	1404	1772	930	294	185	62.1				
230	1041	946	855	974	1179	1577	873	212	131	12.4				
220	892	802	672	740	943	1305	787	133	71.5					
210	744	657	535	665	710	885	665	72.8	20.7					
200	611	536	440	445	520	503	495	12.4						
190	504	446	375	366	388	270	83.8							
180	423	380	328	310	298	177								
170	360	328	292	266	242	132								
160	309	282	260	228	205	108								
150	268	244	227	197	174	93.5								
140	234	207	194	173	147	83.6								
130	199	180	168	156	126	78.9								
120	171	155	152	142	117	74.1								
110	78.9	113	87.9	52.8	73.9	56.5								

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO													60 W	30 DEC 1960
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100		
Q _z KP	4	4	3	3	3	2	2	2	53	3	3	4		
HMIN	255	219	211	238	251	191	229	218	109	109	110	110		
SCAT	43.4	34.4	28.6	56.3	42.2	45.8	44.1	30.0	31.6	45.0	45.9	54.2		
HMAXF	334	287	267	354	336	286	303	283	246	255	255	286		
SHMAX	161	168	99	169	135	153	104	182	555	756	904	1100		
KM														
360				219										
350				218										
340	286			215	235									
330	285			209	233									
320	278			189	226									
310	264			184	210									
300	244			167	190		188							
290	214	382		147	164	240	184	446			1215			
280	175	378		125	132	239	175	445			1211			
270	128	359	262	101	97.0	233	164	424			1188			
260	58.9	326	258	74.9	60.0	221	146	379		1084	1277	1144		
250		271	238	50.3		202	118	307	1143	1081	1273	1080		
240		179	204	12.4		179	79.6	200	1133	1054	1241	993		
230		81.3	147			153	12.4	106	1069	997	1180	885		
220		12.4	76.8			124		949	919	1097	772			
210						91.2		737	812	939	661			
200						62.2		470	669	755	563			
190								288	507	585	484			
180								189	376	451	418			
170								140	286	354	357			
160								110	223	284	297			
150								93.0	180	238	242			
140								82.4	148	206	195			
130								77.5	127	174	160			
120								72.6	117	151	150			
110								43.1	86.9	40.2	12.4			

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO								60 W		30 DEC 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
Qz KP	4	A4	A4	A4	A4	A3	A3	A3	2	2	2	F3	
HMIN	110	109		109	109			200	209	197	291	280	
SCAT	44.5	62.5		53.4	63.4			43.4	42.5	63.7	40.7	51.2	
HMAXF	278	312		289	303			283	284	323	368	378	
SHMAX	1139	1587		1165	1266			405	197	169	117	167	
KM													
380													251
370												219	250
360												217	244
350												208	231
340												192	216
330												198	176
320		1640										198	142
310		1640			1341							196	107
300		1625			1341							192	59.0
290		1590			1367	1328		716	375	185			54.8
280	1446	1530			1357	1299		716	374	176			
270	1436	1457			1314	1253		701	365	165			
260	1389	1361			1254	1191		666	346	151			
250	1302	1239			1178	1120		615	319	134			
240	1184	1074			1073	1008		541	271	113			
230	1034	901			928	878		444	202	90.2			
220	868	732			771	741		330	115	67.4			
210	716	587			631	602		177	12.4	47.7			
200	588	479			515	480		12.4		12.4			
190	488	404			419	382							
180	413	351			345	304							
170	352	309			289	246							
160	306	273			245	204							
150	268	239			209	171							
140	234	205			179	146							
130	196	178			159	128							
120	168	165			148	118							
110	49.6	65.5			55.6	55.6							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

31 DEC 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _z KP	3	3	4	4	4	3	3	3	A3	A3	3	4
HMIN	215	216	211	230	218	221	249	229		110	109	109
SCAT	39.8	34.5	33.4	47.6	61.9	53.6	45.9	44.3		41.6	44.0	48.4
HMAXF	306	288	275	313	350	327	335	306		256	248	263
SHMAX	175	145	144	140	190	152	140	251		847	789	879
KM												
360					219							
350					219							
340					217		235					
330					213	212	234					
320					235	205	211	229				
310	316				234	195	206	217	469			
300	314				230	181	199	201	467			
290	301	310			221	165	186	180	454			
280	282	306	335		205	147	172	150	430			
270	250	289	333	186	128	153	111	396		1096		
260	208	262	317	161	108	130	66.9	337		1393	1094	
250	154	215	289	174	87.5	104	12.4	238		1385	1167	1074
240	103	158	241	69.5	67.5	75.0		130		1340	1158	1029
230	63.9	93.4	166	3.2	48.9	47.9		12.4		1250	1115	965
220	30.7	41.6	70.6		12.4					1133	1048	872
210										924	951	752
200										639	814	633
190										397	637	524
180										283	455	434
170										225	333	361
160										180	269	308
150										149	227	264
140										128	192	227
130										121	166	191
120										114	150	169
110										12.4	49.0	62.8

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

31 DEC 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q _z KP	4	A4	3	A3	A3	S2	A2	2	3	3	3	3
HMIN	107		108	108		110	202	200	237	254	209	256
SCAT	60.6		54.0	52.3		40.1	34.6	54.9	51.5	40.6	53.8	51.1
HMAXF	281		291	284		272	272	292	346	342	338	350
SHMAX	990		1398	1174		777	441	282	249	218	297	266
KM												
350									355	389		410
340									354	389	389	406
330									346	381	387	395
320									332	361	378	375
310									312	331	363	349
300			1640					414	285	286	339	313
290	1004		1640	1433				414	249	233	311	262
280	1004		1623	1431		1143	971	409	209	174	278	201
270	996		1579	1408		1142	971	397	165	103	239	129
260	974		1499	1359		1117	943	378	115	46.6	193	46.6
250	936		1398	1280		1053	876	354	63.7		144	
240	887		1273	1182		959	764	320	19.6		104	
230	826		1110	1052		838	601	273			73.0	
220	753		913	886		699	387	211			47.3	
210	675		716	694		559	172	140			7.3	
200	594		557	523		428		12.4				
190	511		442	407		319						
180	437		366	334		238						
170	371		318	290		181						
160	317		281	255		144						
150	275		251	224		119						
140	242		222	194		102						
130	210		194	168		91.9						
120	177		174	151		84.5						
110	160		122	112		12.4						

[illegible]

TABLES OF IONOSPHERIC DATA

SEPTEMBER 1960 - NOVEMBER 1952

Table 1

Resolute Bay, Canada (74.7° N, 94.9° W)								September 1960	
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00	5.6	27	290					2.80	
01	5.9	28	280					2.80	
02	6.0	30	275					2.80	
03	5.6	30	290					2.80	
04	5.6	24	290					2.90	
05	5.8	25	270					2.90	
06	5.9	25	280			1.80		2.90	
07	5.8	25	280					2.95	
08	5.8	25	270			2.30		2.95	
09	380	6.2	26	240	4.0		2.60	2.80	
10	370	6.0	25	240	4.0		2.80	2.80	
11	410	5.8	28	240	4.1		2.80	2.70	
12	400	6.4	26	230	4.4	100	2.85	2.75	
13	355	6.4	27	230	4.3	100	2.90	2.80	
14	400	6.2	25	240	4.3		2.80	2.70	
15	400	6.2	27	240	4.0	100	2.90	2.70	
16	(365)	6.2	27	250	4.0	120	2.50	2.75	
17	---	6.2	26	250			2.30	2.75	
18	6.0	27	280				2.10	2.80	
19	6.4	29	280				1.85	2.80	
20	6.0	29	285					2.80	
21	5.8	30	280					2.70	
22	5.6	30	280					2.80	
23	5.8	29	285					2.75	

Time: 90.0°W.

Sweep: 1.5 Mc to 20.0 Mc in 15 seconds.

Table 2

Tromsø, Norway (69.7° N, 19.0° E)								September 1960	
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00								4.2	
01	(4.8)	3	---					3.8	----
02	(4.4)	5	---					4.2	
03	(3.7)	2	(345)					4.2	
04	(4.6)	3	(300)					3.2	
05	(4.4)	6	(300)					1.8	(2.70)
06	(5.1)	11	280					1.95	2.80
07	---	5.5	17	(260)				2.40	2.90
08	(255)	6.1	19	(250)			105	2.70	2.70
09	---	6.9	16	250			115	2.80	2.85
10	---	7.1	19	245			105	3.00	2.80
11	---	>7.5	22	240			110	3.05	2.75
12	---	8.0	24	245			110	3.00	2.90
13	---	7.9	28	240			110	2.95	2.85
14	---	7.7	28	240			110	2.75	2.90
15	---	7.4	25	245			110	2.50	2.90
16	(250)	7.7	21	250			120	2.25	2.90
17	---	7.2	25	(250)			120	1.90	3.0
18	---	6.6	25	(270)			120	3.1	(2.70)
19	---	5.8	18	260			120	3.9	----
20	---	5.6	11	270			---	4.7	----
21	---	(5.3)	6	290			---	4.0	----
22	---	(5.2)	2	290			---	4.1	----
23	---	(4.3)	7	(315)			---		
	---	(4.1)	6	---			---		

Time: 15.0°E.

Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 3

Kiruna, Sweden (67.8° N, 20.3° E)								September 1960	
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		(5.0)	9	340			4.8	(2.6)	
01		4.8	10	340			4.2	(2.5)	
02		4.9	10	320			4.4	(2.6)	
03		4.0	11	320			4.2	(2.6)	
04		4.0	13	295			2.6		
05		4.5	19	280			2.8		
06	---	5.6	22	260	---	110	2.0	2.9	
07	---	5.8	26	250	---	110	2.4	2.9	
08	(320)	6.3	25	245	4.0	110	2.6	2.9	
09	(300)	6.8	26	240	4.4	110	2.8	2.9	
10	300	7.2	28	235	4.6	110	3.0	2.9	
11	320	7.2	29	230	4.6	110	3.0	2.9	
12	<340	7.4	28	230	---	110	3.0	2.9	
13	(280)	7.6	27	235	4.4	110	3.0	3.0	
14	(260)	7.3	26	235	---	115	2.9	2.9	
15	---	7.4	27	245	---	115	2.7	2.9	
16	---	7.2	28	250	---	120	2.4	3.0	
17	---	6.7	25	255	---	130	2.0	3.0	
18	---	6.7	23	255	---	1.9	2.4	3.0	
19	---	6.0	22	285	---	---	2.6	2.7	
20	---	5.5	19	310	---	---	3.5	2.7	
21	---	5.0	12	365	---	---	4.0	2.65	
22	---	(5.5)	8	345	---	---	4.9	----	
23	---	(4.0)	7	350	---	---	4.4	(2.5)	

Time: 15.0°E.

Sweep: 0.8 Mc to 15.0 Mc in 30 seconds.

Table 4

Sodankylä, Finland (67.4° N, 26.6° E)								September 1960	
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		(5.1)	3	360			(3.8)	----	
01		(4.3)	5	360			(3.5)	(2.50)	
02		(4.3)	5	360			(3.6)	(2.60)	
03		(4.3)	3	340			(3.3)	----	
04		(3.9)	4	310			(3.4)	----	
05		(4.5)	8	310			(2.5)	(2.80)	
06		4.6	17	280		140	1.75	2.8	2.80
07		5.4	18	260	---	125	2.30	(3.3)	2.95
08		6.2	22	250	---	120	2.65	(3.3)	2.90
09		6.6	26	240	---	120	2.80	(3.5)	2.80
10		7.4	25	230	---	115	3.00	(3.8)	2.85
11		7.4	24	230	---	115	3.10	(4.5)	2.85
12		7.5	28	230	---	115	3.10	(4.0)	2.80
13		7.6	26	230	---	115	3.05	(3.8)	2.85
14		7.8	26	230	---	120	3.00	(3.8)	2.90
15		7.6	23	240	---	120	2.90	(3.7)	2.90
16		7.8	23	240	---	125	2.70	(3.5)	2.95
17		7.4	23	250	---	125	2.50	(3.3)	2.90
18		(7.4)	18	255	---	135	2.15	(3.2)	2.90
19		7.0	16	260	---	---	E	3.0	2.90
20		6.4	11	280	---	---	E	(2.9)	2.75
21		(6.0)	6	290	---	---	---	3.2	(2.70)
22		(4.7)	6	350	---	---	---	(3.7)	(2.75)
23		(4.9)	5	360	---	---	---	(4.1)	(2.45)

Time: 30.0°E.

Sweep: 1.4 Mc to 22.0 Mc in 8 minutes, automatic operation.

Table 5

Lycksele, Sweden (64.6° N, 18.8° E)								September 1960	
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		4.3	23	330			3.5	2.4	
01		4.2	22	340			3.5	2.4	
02		4.0	23	330			3.2	2.4	
03		3.9	22	310			3.1	2.4	
04		4.0	23	300			0.95	3.0	2.5
05		4.4	25	265			1.60	3.1	2.6
06		5.4	27	250		100	2.00	2.7	2.8
07	---	5.8	28	240	---	100	2.40	3.8	2.8
08	(360)	6.4	26	235	4.4	100	2.70	4.8	2.8
09	(370)	6.8	29	225	4.5	100	2.90	4.8	2.8
10	(390)	7.1	29	220	4.7	100	3.10	4.8	2.8
11	(370)	7.6	30	215	4.6	100	3.15	4.6	2.7
12	(330)	7.8	30	210	4.7	100	3.20	4.8	2.7
13	(340)	8.0	30	215	4.4	100	3.10	5.0	2.8
14	---	7.8	30	220	---	100	3.00	5.0	2.8
15	---	7.8	29	235	---	100	2.80	4.3	2.7
16	---	7.9	28	240	---	100	2.50	4.7	2.8
17	---	7.6	28	240	---	110	2.20	3.9	2.8
18	---	7.2	28	245	---	---	1.80	3.5	2.8
19	---	6.8	25	250	---	115	1.10	2.5	2.7
20	---	5.7	25	250	---	---	0.90	3.5	2.7
21	---	5.2	25	265	---	---	---	3.2	2.7
22	---	4.6	24	310	---	---	---	3.2	2.5
23	---	4.8	22	320	---	---	---	3.5	2.4

Time: 15.0°E.

Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.

Occasionally, 1.4 Mc to 15.0 Mc in 6 minutes, automatic operation.

Table 6

Nurmijärvi, Finland (60.5° N, 24.6° E)							September 1960	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.6)	3					----
01		(3.9)	2					----
02		(5.2)	1					----
03		(4.6)	4					----
04		(3.6)	2					----
05		(4.3)	3					----
06		(4.7)	9					(3.00)
07		5.7	14	----				3.10
08		6.6	18					3.00
09		6.7	22	----		2.60		2.90
10		7.4	22					3.00
11		8.3	24	----		3.00		3.00
12		8.2	25	----				2.95
13		8.2	25					2.95
14		8.8	24					2.90
15		8.2	26	----				3.00
16		7.9	24	----				3.00
17		8.1	22					3.00
18		8.0	16					3.10
19		(7.7)	9					(3.00)
20		(8.4)	6					(3.00)
21		(8.2)	5					(2.90)
22		(6.4)	4					----
23		(5.9)	2					----

Table 7

Upsala, Sweden (59.8° N, 17.6° E)									
September 1960									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		4.0 24	310				2.0	2.4	
01		4.1 23	305		---	---	2.3	2.4	
02		4.3 21	310		---	---	2.3	2.4	
03		3.8 20	300		---	---	2.3	2.45	
04		3.4 22	290		---	---	2.3	2.5	
05	---	3.9 26	280	---	110	1.50	2.3	2.7	
06	---	5.0 29	250	---	105	2.00	2.7	2.8	
07	---	5.9 27	245	---	105	2.40	2.6	2.0	
08	(415)	6.5 28	240	4.4	105	2.70		2.8	
09	(340)	7.2 29	230	4.6	105	3.10		2.8	
10	320	7.7 29	230	4.7	105	3.10		2.8	
11	(340)	8.2 29	220	4.7	100	3.30		2.8	
12	325	8.3 29	230	4.8	100	3.30		2.8	
13	(315)	8.6 30	230	4.9	100	3.20	3.4	2.7	
14	(380)	8.4 30	230	4.6	100	3.10		2.8	
15	---	8.3 29	240	---	100	3.00		2.8	
16	---	8.2 30	240	---	105	2.70		2.8	
17		8.2 30	250		100	2.20	2.7	2.8	
18		8.2 30	250		100	1.60	2.5	2.8	
19		7.8 30	245		130	1.20	2.2	2.8	
20		7.2 27	250	---	---	---	1.8	2.7	
21		6.0 27	250	---	---	---	1.2	2.7	
22		5.0 25	275	---	---	---	2.2	2.5	
23		4.6 24	300	---	---	---	2.2	2.4	

Time: 15.0°E.

Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.

Occasionally, 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 8

Churchill, Canada (58.8° N, 94.2° W)									
September 1960									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		4.9 28	280					6.0	---
01		5.0 26	310					5.6	---
02		4.6 28	300					4.9	---
03		4.3 27	300					3.8	---
04		4.0 26	335		---	---		3.9	---
05		4.2 27	340		---	---		3.3	---
06		4.8 24	305		---	---		>3.1	---
07	---	5.4 22	290	---	---	---	2.65	3.3	(3.00)
08	---	6.0 24	290	4.1	---	---	3.00	3.9	2.90
09	520	6.2 26	280	4.5	105	3.10	3.1		2.75
10	410	6.4 29	250	4.7	100	3.20			2.70
11	400	6.8 30	230	4.8	105	3.30			2.70
12	385	7.0 28	230	5.0	105	3.40			2.70
13	390	7.5 27	230	4.9	105	3.40			2.70
14	370	7.9 27	230	4.8	105	3.20			2.70
15	385	8.0 28	240	4.6	105	3.05			2.70
16	400	7.5 28	250	4.3	110	2.95			2.70
17	320	7.0 26	270	(3.9)	110	2.70			(2.75)
18	---	6.4 26	290		---	2.45	2.8		(2.80)
19		5.7 28	300		---	---	3.3		---
20		5.6 29	315		---	---	3.2		---
21		5.0 28	315		---	---	5.0		---
22		5.0 28	320		---	---	6.2		---
23		5.0 26	290		---	---	6.0		---

Time: 90.0°W.

Sweep: 1.0 Mc to 17.0 Mc in 16 seconds.

Table 9

Inverness, Scotland (57.4° N, 4.2° W)									
September 1960									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		(4.4) 28	300				<1.3	2.45	
01		(3.9) 27	310				<1.1	2.45	
02		>3.0 24	315				<1.1	(2.50)	
03		(3.2) 25	305				1.2	(2.50)	
04		(3.1) 27	300				<1.3	2.55	
05		3.1 29	300		---	---	<1.3	2.65	
06	---	4.5 29	320	---	(130)	1.90		2.80	
07	---	5.5 29	250	---	120	2.40		2.95	
08	---	6.3 30	240	---	120	2.80		2.95	
09	---	6.7 29	240	---	110	3.10		2.90	
10	---	7.3 20	230	---	110	3.30		2.80	
11	(420)	7.6 28	220	---	110	3.40		2.85	
12	---	8.2 28	220	---	110	3.50		2.85	
13	(450)	8.0 28	220	---	110	3.50		2.85	
14	(440)	7.8 29	220	---	110	3.40		2.85	
15	---	8.0 30	230	---	110	3.20		2.80	
16	---	8.3 29	240	---	120	2.95		2.80	
17		>8.0 29	250		120	2.50		2.85	
18		8.6 29	250		(125)	2.10		2.85	
19		8.1 29	250				(2.0)	2.85	
20		7.5 29	245				<1.6	2.85	
21		6.2 29	250				<1.6	2.70	
22		>5.2 29	260				<1.6	2.55	
23		>4.8 28	300				<1.6	2.50	

Time: 0.0°.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 11

Winnipeg, Canada (49.9° N, 97.4° W)									
September 1960									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		4.0 22	300					2.65	
01		4.2 22	305					2.70	
02		4.0 22	320					2.70	
03		3.9 23	320					2.70	
04		4.0 24	330					2.65	
05		3.7 25	320					2.65	
06		4.2 27	<300		---	1.80		2.80	
07	---	5.4 26	270	---	115	2.30		3.00	
08	---	6.0 26	240	---	110	2.80		2.90	
09	(460)	6.6 26	230	4.6	110	3.10		2.90	
10	385	7.2 26	225	4.7	105	3.40		2.80	
11	330	7.7 27	205	4.8	105	3.50		2.80	
12	365	7.8 26	210	5.0	105	3.60		2.75	
13	380	8.2 26	220	5.0	110	3.60		2.70	
14	390	8.2 27	225	5.1	105	3.50		2.70	
15	(340)	8.3 27	230	4.9	110	3.30		2.70	
16	(325)	8.2 20	235	4.5	110	3.05		2.75	
17	(300)	8.2 28	250	---	110	2.80		2.80	
18		8.2 26	270		125	2.30		2.80	
19		7.8 26	270		---	1.80		2.80	
20		6.8 26	285					2.80	
21		5.6 25	275					2.80	
22		4.9 25	290					2.80	
23		4.3 23	300					2.70	

Time: 90.0°W.

Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 10

De Bilt, Holland (52.1° N, 5.2° E)									
September 1960									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		5.2 30	300				2.0	2.50	
01		4.8 30	310					2.50	
02		4.6 30	300				2.0	2.50	
03		4.3 29	300				2.0	2.50	
04		4.0 29	280				2.6	2.65	
05	---	4.3 29	250	---	---	E	2.6	2.80	
06	---	5.4 28	240	---	120	2.2	2.3	3.15	
07	(390)	6.5 28	225	3.8	100	2.8		3.15	
08	---	7.4 28	220	---	100	3.2		3.05	
09	350	7.9 29	210	4.8	100	3.3	3.4	3.05	
10	320	8.6 28	200	4.8	100	3.5	3.5	2.95	
11	(300)	9.1 28	200	4.9	100	3.7	3.8	2.95	
12	300	9.1 29	200	5.1	100	3.6	3.6	2.90	
13	(300)	9.4 29	210	5.0	100	3.6		2.95	
14	(300)	8.8 30	210	---	100	3.5		2.90	
15	---	8.6 29	225	---	100	3.2		3.00	
16		8.9 30	230	---	100	2.9	3.0	3.00	
17		9.1 30	240	---	110	2.3	2.8	3.00	
18		8.8 30	235	---	---	E	2.4	3.00	
19		8.3 30	230				2.6	3.00	
20		7.3 30	225				3.0	3.00	
21		6.2 30	240				2.0	2.75	
22		6.0 30	255				2.2	2.65	
23		5.4 30	290				2.0	2.60	

Time: 0.0°.

Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 12

St. John's, Newfoundland (47.6° N, 52.7° W)									
September 1960									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		4.6 24	300					2.50	
01		4.4 26	295					2.65	
02		4.1 27	290					2.70	
03		3.9 27	285					2.75	
04		3.4 28	265					2.70	
05	---	4.0 28	270	---				2.85	
06	---	5.8 27	230	---	100	2.35		3.05	
07	(800)	6.9 28	220	---	100	2.80		3.10	
08	(325)	7.0 29	205	---	100	3.10		2.95	
09	340	7.6 28	200	---	100	3.45		3.00	
10	375	7.4 29	200	5.0	100	3.60		2.85	
11	370	7.6 30	200	5.0	100	3.70		2.80	

Table 13

raz, Austria (47.1° N, 15.5° E) September 1960								
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>5.6	21	320				(2.6)
01		5.6	22	330				2.6
02		5.4	23	320				(2.6)
03		5.3	20	320				2.6
04		(4.8)	22	310				(2.6)
05		4.4	20	290				(2.8)
06		5.6	22	250				3.0
07		6.5	22	230				3.0
08		7.7	23	220			3.1	2.9
09		8.4	25 (235)				3.3	3.0
10	310	8.9	25	230				3.0
11	310	>9.0	27	230	(5.3)		3.3	2.9
12	(310)	>8.9	28 (230)		(5.3)			(2.9)
13	300	>9.0	28	230	(5.1)			2.9
14	---	>9.0	26 (235)					2.9
15	(270)	>8.9	27	230				3.0
16		>9.0	27	230				3.0
17		>9.0	26	240				3.0
18		>9.0	25	240				(3.0)
19		>8.8	26	240				(3.0)
20		>6.7	26	250				(2.9)
21		>5.7	24	250				(2.8)
22		>5.6	24	260				(2.6)
23		>5.6	21	290				(2.6)

Time: 15.0°E.

Sweep: 2.0 Mc to 18.0 Mc in 50 seconds.

Table 15

Ottawa, Canada (45.4° N, 75.9° W) September 1960								
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.0	27	290				2.80
01		4.7	28	295				(2.80)
02		4.0	28	300				---
03		4.0	28	300				---
04		3.8	28	300				---
05		3.6	28	295				---
06		5.0	27	270		110	2.0	3.05
07	---	6.4	28	240	---	115	2.7	3.15
08	(550)	7.2	29	220	4.3	110	3.0	3.15
09	300	7.4	30	220	(4.5)	110	3.4	3.05
10	380	8.0	29	210	5.0	105	3.6	3.00
11	345	8.2	29	205	5.0	105	3.7	2.95
12	340	8.7	30	200	5.0	105	3.8	2.90
13	355	9.0	30	215	4.9	110	3.7	2.90
14	350	9.0	30	225	4.8	105	3.6	2.85
15	(470)	9.0	29	230	4.8	110	3.3	2.90
16	(330)	9.0	29	240	---	110	3.0	2.90
17	---	9.0	29	250	---	115	2.6	2.90
18	---	9.0	29	260	---	125	1.8	2.95
19		8.6	29	250				(2.90)
20		7.1	28	260				(2.90)
21		6.0	27	270				(2.80)
22		5.2	27	290				(2.80)
23		5.0	27	300				(2.75)

Time: 75.0°W.

Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 17

Rome, Italy (41.8° N, 12.5° E) September 1960								
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.4)	21	300				(2.60)
01		(6.2)	19	310				(2.55)
02		(6.1)	18	320				(2.50)
03		6.1	17	310				2.55
04		(5.8)	18	300				(2.60)
05		(5.0)	22	270				(2.65)
06		(5.7)	16	250		140	1.9	(3.00)
07	---	(6.9)	19	240	---	120	2.5	(3.00)
08	---	7.9	13	240	---	110	3.0	3.10
09	---	(9.2)	17	230	---	110	3.4	(3.05)
10	---	9.8	20	220	---	110	3.6	2.90
11	---	(8.9)	21	220	---	110	(3.7)	(2.90)
12	---	(9.6)	19	220	---	110	3.8	(2.90)
13	---	9.8	19	220	---	110	3.7	2.85
14	---	(9.9)	21	230	---	110	3.7	(2.90)
15	---	(9.7)	21	240	---	110	3.5	(2.85)
16	---	9.4	16	240	---	110	3.2	2.90
17		9.0	11	250		110	2.7	2.90
18		(8.7)	6	260		130	2.0	(3.00)
19		8.7	11	250				2.5
20		(8.4)	21	250				2.3
21		(8.0)	15	260				2.4
22		(7.0)	17	260				(2.70)
23		(6.4)	16	300				(2.60)

Time: 15.0°E.

Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 14

Sottens, Switzerland (46.6° N, 6.7° E) September 1960								
Time	h'F2	foF2—Count	h'F1	foF1	h'E	foE	foEs	(M3000)F2
00	300	5.7	29					2.8
01	310	5.3	29					2.8
02	320	5.2	30					2.7
03	320	5.0	30					2.7
04	300	4.7	29					2.8
05	290	4.3	27	---	---	---	---	2.8
06	260	4.7	27	---	---	---	---	3.0
07	240	5.8	28	230	3.8	120	2.2	3.2
08	240	7.5	27	230	4.3	110	2.7	3.2
09	250	7.8	29	220	4.6	100	3.1	3.2
10	260	8.5	27	230	5.0	100	3.3	3.3
11	260	9.0	29	220	5.2	100	3.5	3.2
12	280	9.0	29	220	5.2	100	3.6	3.1
13	300	9.2	30	220	5.5	100	3.5	3.1
14	300	9.1	30	220	5.5	100	3.4	3.1
15	270	9.0	30	230	5.3	100	3.4	3.2
16	260	8.9	29	230	4.8	100	3.1	3.2
17	240	8.8	29	230	4.5	110	2.7	3.1
18	250	8.9	23	---	---	120	2.2	3.2
19	240	8.6	26	---	---	---	---	3.2
20	240	7.7	27					3.1
21	240	7.0	28					3.0
22	260	6.2	28					2.9
23	270	5.9	28					2.8

Time: 15.0°E.

Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 16

Wakkanai, Japan (45.4° N, 141.7° E) September 1960								
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.8	28	300				2.65
01		5.7	28	310			2.4	2.65
02		5.6	28	295			2.0	2.70
03		5.4	28	285			1.4	2.70
04		5.2	29	295				2.65
05		5.5	29	290				2.75
06		7.9	29	245	---	2.25	2.6	3.10
07	(495)	8.9	29	240	---	2.75	3.0	3.05
08	(310)	9.0	29	240	4.3	3.10	3.5	3.05
09	310	9.7	28	235	4.7	3.35	3.5	3.00
10	(340)	10.6	26	230	4.8	3.45	4.0	2.90
11	(345)	10.6	24	220	---	3.50	4.2	2.85
12	(340)	10.6	24	230	---	3.50	3.5	2.80
13	(340)	9.9	26	235	---	3.40	3.4	2.85
14	(315)	9.6	28	240	---	3.35	3.8	2.85
15	---	9.8	30	245	---	3.10		2.90
16	---	9.4	30	245	---	2.75	3.0	2.90
17		9.4	30	250	---	2.20	3.0	2.95
18		9.1	29	250				2.8
19		8.0	28	250				2.85
20		7.4	27	260				2.5
21		7.0	27	270				2.4
22		6.6	28	275				2.70
23		6.2	29	300			2.4	2.65

Time: 135.0°E.

Sweep: 1.0 Mc to 20.7 Mc in 1 minute.

Table 18

Akita, Japan (39.7° N, 140.1° E) September 1960								
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.5	27	295			1.9	2.70
01		6.1	27	295				2.70
02		6.1	27	290				2.70
03		5.9	29	280			2.0	2.75
04		5.4	29	265			2.0	2.75
05		5.5	29	295				2.75
06	---	8.2	29	245	---	2.00	2.4	3.20
07	(270)	9.8	30	240	---	2.80	3.4	3.20
08	250	10.4	29	225	4.5	3.15	3.7	3.15
09	245	10.2	29	225	5.0	3.50	4.1	3.10
10	255	10.4	29	210	5.0	3.60	4.0	2.95
11	260	10.9	29	205	5.2	3.80	4.3	2.90
12	300	11.4	28	210	5.3	3.75	4.1	2.85
13	300	11.0	28	220	---	3.70	3.9	2.85
14	295	10.8	28	230	---	3.55		2.85
15	295	10.9	29	245	---	3.30	3.6	2.90
16	(295)	11.0	29	250	---	2.95	3.6	3.00
17	---	10.5	30	250	---	2.30	3.2	3.00
18		9.6	30	245			(2.8)	3.05
19		8.5	30	245			(2.8)	3.00
20		7.6	30	245			(2.8)	2.90
21		7.1	29	250			(2.1)	2.80
22		6.8	28	280			(2.3)	2.70
23		6.7	28	290			(2.3)	2.70

Time: 135.0°E.

Sweep: 1.6 Mc to 20.0 Mc in 20 seconds.

Table 19

Tokyo, Japan (35.7° N, 139.5° E)								September 1960
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6 30	300					2.60
01		6.5 30	300					2.60
02		6.2 30	295					2.65
03		6.0 30	265					2.70
04		5.5 30	260					2.65
05		5.4 30	300					2.65
06	---	8.3 30	245	---		2.20		3.10
07	(320)	10.0 30	240	---		2.80	3.2	3.15
08	260	10.5 30	230	---		3.20	3.7	3.10
09	255	10.4 29	230	---		3.45	4.0	2.95
10	300	10.8 29	225	(5.3)		3.70	4.0	2.80
11	300	11.7 20	220	---		3.70	3.9	2.75
12	310	12.0 30	230	(5.9)		3.80		2.75
13	310	11.8 30	240	(5.8)		3.70	3.8	2.70
14	305	11.6 30	240	(5.3)		3.55	3.7	2.80
15	300	11.8 30	250	---		3.40	3.7	2.80
16	295	11.8 30	250			3.00	3.8	2.05
17	---	11.2 30	255			2.40	3.4	2.90
18	---	10.4 30	250				3.0	3.00
19		8.9 30	250				(3.0)	2.95
20		7.8 30	250				(3.2)	2.80
21		7.0 30	290				2.9	2.60
22		7.2 30	300				2.6	2.65
23		7.0 30	300				2.4	2.60

Time: 135.0°E.

Sweep: 1.0 Mc to 20.0 Mc in 20 seconds.

Table 20

Yamagawa, Japan (31.2° N, 130.6° E)								September 1960
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.9 20	285					2.70
01		7.2 23	290					2.70
02		7.0 21	280					2.70
03		6.9 24	265					2.90
04		6.0 26	250					2.80
05		5.8 25	260					2.85
06		6.7 26	265					3.00
07		9.0 27	240				2.45 2.8	3.25
08		10.2 28	240				3.10 3.5	3.20
09	---	10.3 29	230	---			3.40 3.8	3.05
10	(320)	10.8 29	225	---			3.70 4.1	2.85
11	320	12.2 30	210	5.6			3.80 4.1	2.80
12	320	12.9 30	220	5.6			(3.85)	2.75
13	325	12.8 28	230	5.6			3.85	2.75
14	325	13.0 26	240	6.0			3.70	2.75
15	310	12.7 23	245	5.4			3.60 3.8	2.75
16	310	13.0 24	250	---			3.30 4.0	2.80
17	(300)	12.7 22	250				2.80 3.6	2.90
18		13.2 25	255				1.90 3.3	3.00
19	(11.9)	25	240					2.6 (3.00)
20		9.3 19	240					2.6
21		8.1 15	255					2.65
22	(8.0)	16	290					2.3 (2.60)
23	(7.7)	17	290					1.9 (2.75)

Time: 135.0°E.

Sweep: 1.0 Mc to 20.0 Mc in 30 seconds.

Table 21

El Cerillo, Mexico (19.3° N, 99.5° W)								September 1960
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.0 30	280					2.80
01		6.6 29	280					2.80
02		6.2 28	260					2.90
03		5.8 20	250					2.90
04		5.1 28	255					2.00
05		4.8 28	280					2.80
06		4.8 28	285					2.80
07		7.4 28	250		121	2.10		3.20
08		9.3 28	225		103	2.90	3.0	3.20
09	---	10.2 27	215	---	109	3.35		3.00
10	---	11.0 30	210	---	105	3.70	4.0	2.90
11	(350)	11.4 30	200	5.7	109	3.90		2.80
12	(345)	12.0 30	210	5.5	105	4.00	4.0	2.80
13	(335)	12.0 29	210	5.6	107	4.00	4.3	2.80
14	(325)	13.0 29	215	5.6	103	3.90	4.3	2.80
15	---	13.0 28	230	---	103	3.00	4.2	2.70
16	---	13.0 28	240	---	103	3.50	4.4	2.80
17		12.0 29	240		103	2.95	4.1	2.90
18		11.4 29	240		110	2.20	4.0	3.00
19		10.2 29	230				3.1	3.00
20		9.0 28	240				3.4	2.80
21		8.2 29	260				2.2	2.00
22		7.8 30	280				3.1	2.80
23		7.6 30	270				2.2	2.00

Time: 90.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 22

Singapore, British Malaya (1.3° N, 103.8° E)								September 1960
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		10.9 23	210					2.90
01		9.0 20	240					2.95
02		8.2 25	250				1.2	3.00
03		7.5 26	240		---	---		3.00
04		6.8 23	240		---	---		3.15
05		5.6 26	230		---	---		3.30
06		6.5 28	265	---	125	---	1.6	3.05
07	---	10.4 28	250	---	120	2.75	3.1	3.10
08	---	12.4 29	235	---	115	3.40		2.90
09	---	13.1 29	220	---	110	3.80		2.60
10	280	13.1 28	210	5.3	110	4.00		2.30
11	400	12.7 28	205	---	110	4.20		2.10
12	---	12.2 26	205	5.3	110	4.30		2.10
13	335	12.0 27	210	---	110	(4.30)		2.10
14	---	12.0 27	205	---	110	4.00		2.10
15	---	12.2 26	205	---	110	3.75		2.15
16	---	>12.6 29	240	---	110	3.30		2.20
17	---	13.2 29	255	---	120	2.65		2.25
18	---	13.2 29	290	---	120	---		2.30
19		13.2 27	355					2.20
20		13.3 17	330					2.40
21	(13.0)	13	255					(2.70)
22		13.8 15	230					(3.00)
23		12.8 21	210					3.00

Time: 105.0°E.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 23

Huancayo, Peru (12.0° S, 75.3° W)								September 1960
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.2 23	225					3.00
01		7.4 23	235					3.10
02		6.6 22	230					3.15
03		5.6 23	240					3.15
04		5.1 22	245					3.20
05		4.5 22	245					3.18
06		6.0 24	275		<134	1.65		3.00
07		9.6 27	245		119	2.70	3.5	3.10
08		11.6 27	230		117	(3.30)	7.4	2.80
09		12.45 26	215	---	---	(3.70)	8.0	2.60
10	---	12.1 25	205	---	---	(4.00)	8.0	2.30
11	---	11.25 26	200	---	---	(4.05)	8.5	2.30
12	---	11.1 25	200	---	---	(4.10)	8.1	2.20
13	---	11.0 25	195	---	---	(4.10)	8.0	2.20
14	---	10.9 25	195	---	---	(3.92)	8.0	2.25
15		11.0 26	200		---	(3.65)	7.9	2.20
16		10.4 26	230		---	(3.28)	7.5	2.25
17		9.9 25	255		115	(2.65)	5.8	2.25
18		9.7 25	295		<159	1.60	4.0	2.25
19		8.7 23	400					2.10
20		8.9 11	335					2.30
21		9.2 14	275					2.58
22		9.0 15	230					2.90
23		9.05 20	220					3.00

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 24

Townsville, Australia (19.3° S, 146.7° E)								September 1960
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>6.0 3	250					---
01		(6.7) 2	240					---
02		>5.8 9	240					---
03		>5.0 11	250					(2.80)
04		>5.0 11	280					(2.75)
05		>4.3 11	<300					(2.90)
06		>4.7 10	285			<1.70		---
07		>7.0 5	250			2.65		---
08		>11.0 12	230			3.15	3.2	---
09		>11.1 16	230			3.50		(3.15)
10		12.3 15	220			3.70	3.7	3.05
11		12.3 16	220			(3.80)	(4.8)	3.00
12		11.8 18	200			3.80		2.90
13		11.8 19	205			3.75	3.8	2.80
14		>11.5 20	200			3.65	3.8	2.80
15		>11.0 16	220			3.50	3.9	(2.70)
16		>10.8 15	225			3.25	3.5	(2.80)
17		>10.5 3	250			2.75		---
18		>8.2 2	260			1.90		---
19		>6.7 2	275				1.9	---
20		>6.5 1	290					---
21		>6.5 1	280					---
22		>6.0 1	270					---
23		---	0	260				---

Time: 150.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 25

Brisbane, Australia (27.5° S, 152.9° E)										September 1960	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2			
00		7.6	29	250				2.80			
01		7.0	30	250				2.75			
02		6.2	30	250				2.70			
03		5.6	30	250				2.65			
04		5.4	30	290				2.55			
05		5.4	30	285				2.65			
06		7.5	30	250		1.75		3.05			
07		>8.5	30	240		2.40		3.15			
08		>8.5	29	240		3.20		(3.25)			
09		(9.8)	28	230		3.50		3.05			
10		(10.2)	28	220		3.80		2.95			
11		(10.0)	29	220		3.80		2.95			
12		(9.7)	27	210	5.0	3.80	4.0	2.80			
13		(10.1)	27	220	---	3.70		2.80			
14		(9.3)	29	220	4.6	3.60		2.75			
15		>8.5	28	220		3.40		2.85			
16		>8.5	28	240		2.90	3.1	2.85			
17		>8.5	30	250		2.30		2.85			
18		>8.5	30	250				2.80			
19		>8.5	30	250				2.75			
20		>8.5	29	260				2.75			
21		>8.5	29	280				2.75			
22		8.5	29	260				2.80			
23		7.8	29	260				2.75			

Time: 150.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 26

Talara, Peru (4.6° S, 81.3° W)										August 1960	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2			
00		9.45	26	220				3.00			
01		9.2	27	230				3.05			
02		9.05	28	240				3.15			
03		7.55	28	230				3.25			
04		5.5	27	230				3.30			
05		4.6	24	240				3.15			
06		3.3	23	250				3.00			
07		6.4	28	260				3.00			
08		8.2	31	235				2.75			
09	---	9.1	31	220				2.45			
10	---	9.7	31	215				2.30			
11	---	10.1	31	210				2.20			
12	(440)	10.2	30	205	5.3	109	3.90	2.20			
13	(400)	10.5	30	200	5.5	111	4.00	2.20			
14	(370)	10.4	29	200	5.2	111	3.95	2.10			
15	---	10.2	30	<205	5.2	111	3.85	2.10			
16	---	10.4	31	210	(5.3)	111	3.70	2.22			
17	>10.4	31	230		---	111	3.30	3.8			
18	(10.3)	31	265		<135	2.20		(2.40)			
19	(9.8)	31	315					(2.30)			
20	>9.6	29	355					(2.35)			
21	(9.9)	23	310					(2.52)			
22	(10.6)	24	250					(2.65)			
23	11.2	29	230					3.10			

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 27

Trelew, Argentina (43.2° S, 65.3° W)										December 1959	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2			
00		10.3	18	380			5.0	2.35			
01		10.3	17	345			4.2	2.35			
02		10.1	19	320			3.9	2.40			
03		9.7	17	340			4.0	2.35			
04		9.4	15	360			3.9	2.30			
05	---	>9.3	14	310	---	113	2.60	3.5	(2.20)		
06	---	10.2	15	290	---	115	3.40	4.3	(2.40)		
07	---	>10.4	13	280	---	111	---	4.8	---		
08	---	>10.3	14	---	---	109	---	5.9	(2.35)		
09	485	>10.3	12	---	---	105	---	5.5	(2.30)		
10	420	>10.7	9	---	---	105	---	(5.3)	---		
11	420	>10.6	8	---	---	105	---	---	---		
12	---	(11.4)	2	---	---	---	---	---	---		
13	405	(11.0)	5	---	---	---	---	(4.9)	---		
14	400	>11.0	8	---	---	105	---	(6.0)	---		
15	380	>10.8	9	---	---	109	---	6.6	(2.70)		
16	390	(10.4)	13	---	---	111	---	6.5	(2.50)		
17	360	>10.4	16	---	---	115	---	6.6	2.65		
18	---	10.0	13	---	---	115	---	6.3	(2.60)		
19		9.4	12	(300)	---	---	---	5.8	(2.55)		
20		(9.0)	13	(340)	---	---	---	4.9	(2.35)		
21		(9.4)	11	---	---	---	---	5.9	(2.30)		
22		9.9	16	(410)	---	---	---	5.3	2.30		
23		>9.9	18	400	---	---	---	5.7	2.30		

Time: 60.0°W.

Sweep: 1.3 Mc to 18.0 Mc in 30 seconds.

Table 29

Winnipeg, Canada (49.9° N, 97.4° W)										September 1959	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2			
00		4.0	23	320			3.4	---			
01		3.8	24	350			3.2	---			
02		3.8	23	320			3.7	---			
03		3.8	23	340				---			
04		4.0	22	310			2.4	---			
05		3.9	23	330			2.8	---			
06		4.3	23	300				(2.8)			
07	---	5.0	24	260	---	110	2.4	3.1			
08	(450)	6.0	23	240	4.3	100	2.9	3.0			
09	(450)	6.4	24	220	4.8	100	3.2	2.9			
10	470	6.8	23	220	4.9	100	3.5	2.8			
11	430	7.0	23	210	5.0	100	3.6	2.9			
12	410	7.1	24	210	5.0	100	3.7	2.8			
13	420	7.1	25	220	5.1	100	3.7	2.7			
14	410	7.2	26	220	5.0	100	3.6	2.8			
15	410	7.3	25	220	5.0	100	3.4	(2.65)			
16	(380)	7.4	25	230	4.6	100	3.1	2.8			
17	---	7.3	25	250	---	105	2.8	(2.75)			
18	---	7.2	26	260	---	110	2.3	(2.9)			
19		7.0	27	260	---	---	1.8	---			
20		6.9	24	260				---			
21		(5.0)	24	260				2.3			
22		4.5	22	280				2.4	---		
23		4.6	21	300				3.0	---		

Time: 90.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 28

Lindau/Harz, Germany (51.6° N, 10.1° E)										September 1959	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2			
00		5.62	30	326				2.44			
01		5.45	29	320				2.44			
02		5.02	30	318				2.44			
03		4.78	30	319				2.43			
04		4.64	28	322				2.48			
05		4.34	27	288				2.60			
06	---	4.64	28	279	---	---	---	2.5			
07	---	5.86	29	249	---	108	2.44	3.3			
08	---	6.40	30	232	---	106	2.84	3.6			
09	(388)	7.16	30	229	4.62	103	3.15	4.0			
10	(470)	7.80	30	220	5.13	102	3.38	4.0			
11	(462)	8.21	30	220	5.20	103	3.53	4.2			
12	---	8.50	30	222	---	102	3.57	4.2			
13	---	8.98	29	219	---	102	3.61	4.0			
14	---	8.98	29	226	---	103	3.50	4.1			
15	---	8.67	30	228	---	102	3.30	3.6			
16		8.62	30	235		104	3.07	3.8			
17		8.82	30	242		106	2.72	3.4			
18		8.79	30	248		---	2.06	2.9			
19		8.93	30	242		---	E	2.6			
20		8.29	30	248		---	E	2.81			
21		7.10	30	245				2.75			
22		6.29	30	267				2.57			
23		5.90	30	293				2.45			

Time: 15.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 30

St. John's, Newfoundland (47.6° N, 52.7° W)								September 1959	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		4.1	26	310				2.55	
01		3.9	26	300				2.60	
02		4.2	25	300				2.60	
03		3.8	23	300				2.60	
04		3.1	26	300				2.55	
05		4.0	28	295				2.75	
06		5.9	30	250		108	1.80	3.10	
07	(610)	7.0	29	245	4.6	110	3.00	3.10	
08	G	7.5	30	230	4.5	105	3.20	3.00	
09	440	8.1	30	215	4.8	105	3.60	2.90	
10	(720)	8.5	29	<220	5.0	105	3.80	2.90	
11	490	9.0	29	220	5.2	105	3.90	2.80	
12	(620)	9.0	30	220	5.3	105	3.80	2.80	
13	440	9.0	30	230	5.2	105	3.70	2.75	
14	(580)	9.0	30	235	5.1	105	3.50	2.80	
15	---	9.2	30	240	---	105	3.20	2.80	
16	---	9.2	30	250	---	110	2.90	2.80	
17	---	9.2	30	255	---	130	2.30	2.85	
18		8.9	28	260		---	---	2.80	
19		8.0	25	255				2.80	
20		6.8	24	255				2.70	
21		5.9	28	290				2.60	
22		5.0	25	300				2.50	
23		3.9	26	303				2.60	

Table 31

Ottawa, Canada (45.4° N, 75.9° W) September 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		4.3 26	<300					---	
01		4.0 25	<310					---	
02		4.0 26	305					---	
03		3.9 25	310					---	
04		4.0 25	<320					---	
05		3.5 26	300					---	
06		4.6 30	280		120	2.0		(3.0)	
07	---	6.2 29	250	---	110	2.6		3.1	
08	(470)	7.0 29	235	4.5	110	3.0		3.1	
09	(470)	7.6 28	215	4.9	110	3.3		2.9	
10	(420)	8.1 29	210	5.0	105	3.6		2.9	
11	505	8.4 30	210	5.1	110	3.8		2.9	
12	400	8.6 29	220	5.2	110	3.9		2.8	
13	400	8.8 30	220	5.2	110	3.8		2.8	
14	420	9.0 30	230	5.2	110	3.6		2.8	
15	(430)	9.1 30	230	5.0	110	3.2		2.8	
16	(510)	9.1 30	250	4.9	110	3.0		2.8	
17	(410)	9.2 29	250	---	110	2.6		(2.9)	
18	---	9.0 27	260	---	135	2.0		(2.9)	
19		9.0 26	250					(2.8)	
20		7.2 28	255					(2.8)	
21		6.1 28	265					(2.7)	
22		5.2 28	<310					(2.7)	
23		5.0 27	295					---	

Time: 75.0°W.

Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 33

Ojibouti, French Somaliland (11.6° N, 43.2° E) September 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		(9.0) 1	265		---	---	3.1	---	
01		(9.2) 1	250		---	---	1.7	---	
02		(7.5) 3	230		---	---	1.7	---	
03		(7.0) 2	235		---	---	1.7	---	
04		(7.0) 1	230		---	---	1.7	---	
05		(6.8) 4	220		---	---	1.7	---	
06		(6.4) 9	250		---	E	1.9	(3.00)	
07		(9.7) 5	240		110	2.70	3.6	(3.10)	
08		(11.6) 3	230		110	3.25	4.0	---	
09		(12.6) 2	225		---	3.70	6.6	---	
10		(12.6) 1	220		---	3.95	6.7	---	
11		(12.0) 3	220		---	4.10	6.7	---	
12		(11.6) 3	(230)		---	4.10	6.8	---	
13		(12.0) 2	220		---	4.10	6.7	---	
14	---	(11.6) 1	225		---	4.10	6.5	---	
15	---	---	0 230		---	3.80	4.4	---	
16	---	(12.4) 1	235		---	3.40	4.3	---	
17	---	---	0 250		---	---	4.4	---	
18	---	---	0 280		---	E	3.5	---	
19	---	0	2 370		---	E	1.7	---	
20	---	---	0 ---		---	---	1.6	---	
21	---	---	0 (310)		---	---	1.6	---	
22	---	---	0 (260)		---	---	2.0	---	
23	---	---	0 270		---	---	3.2	---	

Time: 45.0°E.

Sweep: 1.25 Mc to 20.0 Mc.

Table 35

Tahiti, Society Is. (17.7° S, 149.3° W) September 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		12.1 26	240		---	E	2.2	3.00	
01		10.0 23	230		---	E	2.4	2.80	
02		9.0 24	240		---	E	2.2	2.70	
03		>8.8 26	255		---	E	2.2	2.60	
04		7.9 27	265		---	E	2.4	2.80	
05		7.5 28	265		---	E	2.6	2.75	
06		9.0 28	275		---	1.70	3.0	2.85	
07		12.3 28	250		115	2.80		3.10	
08		13.5 27	235		110	(3.35)		3.15	
09	---	14.0 27	230		105	3.70		3.00	
10	---	14.0 25	220		105	4.00		2.90	
11	---	14.0 26	215		105	4.00		2.80	
12	---	13.6 28	210		---	105 (4.00)		2.65	
13	(380)	13.9 28	215		---	105 4.00		2.60	
14	400	14.4 29	215		---	105 3.75		2.50	
15	(410)	14.4 28	225		---	110 (3.50)	3.9	2.50	
16	---	14.7 24	240		110	2.60	4.0	2.45	
17	---	14.9 24	260		120	2.60	3.1	2.50	
18	0	21	300		---	---	3.1	2.50	
19	0	23	302		---	E	3.1	(2.55)	
20	0	23	260		---	E	2.8	(2.70)	
21	0	21	240		---	E	2.7	(2.80)	
22	0	23	240		---	E	2.9	2.90	
23		14.6 26	240		---	E	2.4	2.90	

Time: 150.0°W.

Sweep: 1.2 Mc to 17.0 Mc.

Table 32

Oakar, French W. Africa (14.8° N, 17.4° W) September 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		(12.1)	4 325				2.8	----	
01		(12.9)	7 300				2.5	----	
02		(12.8)	9 270			E	2.4	----	
03		>8.7	12 235			E	2.6	----	
04		6.7	17 230			E	2.6	2.85	
05		6.8	20 240			E	2.6	2.80	
06		6.4	24 225			E	2.8	3.05	
07		6.7	23 245			E	3.1	3.05	
08		9.4	25 230		110	2.60	4.7	3.25	
09	---	11.2	26 <225	---	115	3.25	5.0	3.05	
10	---	12.9	27 <220	---	105	3.65	4.6	2.90	
11	---	13.7	27 210	---	100	3.95	4.6	2.80	
12	---	14.9	28 200	---	100	4.10	4.6	2.70	
13	---	15.2	30 200	---	100	4.10	4.6	2.60	
14	---	15.6	30 200	---	100	4.10	4.2	2.50	
15	---	16.0	29 210	---	100	4.00	4.0	2.45	
16	---	16.0	29 220	---	105	3.70	4.0	2.55	
17	---	(16.0)	22 230	---	100	3.30	3.8	(2.50)	
18		14.5	19 245		105	2.75	4.5	2.50	
19		14.4	16 270		---	1.85	3.0	(2.55)	
20		(14.2)	15 350				3.0	(2.25)	
21		(13.1)	4 375				2.8		
22		>12.2	2 360				2.4	----	
23		(12.2)	6 350				2.8	----	

Time: 0.0°.

Sweep: 1.2 Mc to 17.0 Mc.

Table 34

Ibadan, Nigeria (7.4° N, 3.9° E) September 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		9.8 30	270					----	
01		10.2 30	250					(2.80)	
02		9.8 29	250					----	
03		9.0 29	245					3.10	
04		7.9 29	235					3.15	
05		6.9 29	230					3.25	
06		8.6 28	255			2.20		3.10	
07		11.6 28	240			3.10		3.10	
08		13.3 29	230			3.55	6.8	2.80	
09		13.9 29	220			3.90	9.5	2.50	
10		13.8 29	215			4.10	9.5	2.25	
11		12.9 29	210			4.20	9.6	2.20	
12		12.7 27	205			4.25	9.2	2.25	
13		12.6 30	210			4.20	9.2	2.20	
14		12.6 29	210			4.00	7.8	2.15	
15		12.4 29	215			3.70	8.5	2.15	
16		12.5 29	235			3.25	6.4	2.20	
17		(11.9)	29 260			2.55		(2.15)	
18		>10.8	24 320			1.40		<2.15	
19		(8.9)	29 425			----		(2.00)	
20		9.5 29	420					----	
21		9.6 29	340					----	
22		9.5 28	300					----	
23		9.8 30	285					----	

Time: 0.0°.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 36

Tanananive, Madagascar (18.8° S, 47.5° E) September 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		7.0 26	230		---	E	2.1	3.00	
01		5.9 25	225		---	E	1.7	2.90	
02		5.0 25	240		---	E	1.8	2.65	
03		4.8 26	265		---	E	1.7	2.70	
04		4.5 24	260		---	E	1.8	2.70	
05		4.2 26	260		---	E	1.8	2.75	
06		6.9 26	240		---	E	2.9	3.10	
07		10.2 23	225		100	2.80		3.20	
08		11.8 23	220		100	3.30		2.95	
09		12.8 22	230		100	3.70		2.90	
10		13.0 24	225		100	3.95		2.85	
11		12.8 25	220		100	4.00		2.85	
12		12.2 25	215		100	4.05		2.70	
13		12.4 25	220		100	4.00		2.65	
14	---	12.2 27	220	---	100	3.80		2.65	
15		12.0 26	230		110	3.55	3.8	2.65	
16		11.8 23	220		110	3.15	3.3	2.65	
17		11.8 22	240		110	2.50	2.7	2.75	
18		11.5 23	240		---	----	2.4	2.85	
19		11.0 22	230				2.2	2.90	
20		10.6 23	230				2.7	2.95	
21		9.4 22	230				2.3	3.00	
22		9.0 26	240				2.2	2.95	
23		8.2 24	230				2.0	3.00	

Time: 45.0°E.

Sweep: 1.25 Mc to 20.0 Mc.

Table 37

Sao Paulo, Brazil (23.5° S, 46.5° W)							
September 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	14.0	19	225				(3.05)
01	13.8	22	225				3.20
02	11.4	21	210				2.95
03	8.4	19	230				2.75
04	7.6	21	255				2.75
05	7.1	21	255				2.80
06	7.4	20	260				2.70
07	10.3	22	230			(2.70)	3.00
08	12.0	21	230			(3.35)	2.80
09	12.7	20	220			----	2.80
10	13.7	19	215			----	2.60
11	>14.0	20	<220			----	2.60
12	---	14.0	20	<220	---	----	(2.60)
13	---	14.0	19	<250	----	----	2.50
14	(415)	14.0	20	230	----	----	2.55
15	(390)	14.3	22	220	----	----	(2.65)
16	(360)	>14.0	24	235	----	----	(2.65)
17		14.0	24	250	----	----	(2.70)
18		14.0	21	270			(2.80)
19		13.9	20	300			(2.80)
20		14.0	16	280			(3.00)
21		>14.1	14	240			(3.00)
22		(14.0)	17	230			(3.00)
23		>14.0	18	230			(3.00)

Time: 45.0°W.
Sweep: 1.75 Mc to 20.0 Mc in 2 minutes 30 seconds.

Table 39

Capetown, Union of S. Africa (34.1° S, 18.3° E)							
September 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	4.6	30	---				<1.6 2.70
01	4.2	30	---				<1.6 2.65
02	4.0	30	---				<1.6 2.65
03	4.1	29	---				<1.4 2.70
04	3.9	29	---				<1.5 2.65
05	3.6	29	---				<1.4 2.65
06	3.4	28	---				<1.4 2.60
07	6.5	29	250			2.0	3.05
08	9.1	29	240			2.7	3.10
09	---	10.9	29	240		3.2	3.05
10	---	12.0	29	235		3.6	2.90
11	---	12.6	29	225		3.8	2.80
12	---	12.9	29	225		(3.9)	2.75
13	---	12.9	29	220		4.0	2.70
14	---	13.0	29	225		3.8	2.70
15	---	12.8	29	240		3.7	2.65
16	---	12.5	28	240		3.4	3.5
17	---	>12.0	29	240		3.0	3.2
18		11.9	29	250		2.2	2.80
19		11.2	29	235		<1.6	<1.7 2.85
20		9.8	28	225		<1.5	2.95
21		8.6	28	230		<1.5	2.95
22		6.8	29	235		<1.6	3.00
23		5.4	30	(235)		<1.6	2.90

Time: 30.0°E.
Sweep: 1.0 Mc to 18.0 Mc in 7 seconds.

Table 41

Canberra, Australia (35.3° S, 149.0° E)							
September 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	>7.0	25	260				2.65
01	>6.5	28	270				(2.60)
02	(6.2)	27	260				(2.60)
03	>6.0	26	260				(2.60)
04	>5.5	27	260				2.60
05	(5.7)	25	260				2.60
06	>6.0	22	260			<1.60	(2.70)
07	>8.0	23	240			2.60	----
08	>9.6	26	230			3.15	3.00
09	(11.0)	26	220			3.50	(3.00)
10	(11.3)	26	210			3.65	2.90
11	11.7	25	210			3.80	2.75
12	>12.0	25	200			3.85	2.75
13	(11.7)	25	210			3.80	2.75
14	11.7	25	210			3.75	2.70
15	11.3	26	210			3.50	2.80
16	>10.4	26	230			3.15	2.75
17	>10.0	23	240			2.60	(2.80)
18	>9.9	20	250			1.60	----
19	>8.5	21	240			----	----
20	(8.2)	15	250			----	----
21	>7.5	17	250			----	----
22	>7.0	19	250			----	(2.70)
23	>7.0	19	260			----	----

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 38

Johannesburg, Union of S. Africa (26.1° S, 28.1° E)							
September 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	5.5	27	235				<1.4 2.85
01	5.0	27	250				1.5 2.70
02	4.7	27	250				1.2 2.75
03	4.4	26	270				2.70
04	4.1	26	250				1.2 2.80
05	4.0	25	250				<1.1 2.80
06	5.4	26	265			1.6	2.90
07	9.0	26	230			2.6	3.25
08	---	10.6	26	225		3.2	3.15
09	(260)	12.0	27	220		3.6	3.00
10	260	12.7	27	215	---	3.9	2.90
11	(260)	12.7	27	210	---	4.0	2.80
12	(260)	12.7	27	200	---	4.1	2.75
13	(305)	12.5	28	205	---	4.0	2.70
14	---	12.6	28	210	---	3.9	2.65
15	---	12.2	28	220	---	3.6	2.70
16	---	12.0	28	225	---	3.3	2.70
17		11.7	27	240		2.7	2.80
18		11.5	27	240		1.9	2.85
19		10.7	27	230			2.90
20	(9.7)	27	220				<1.5 (2.95)
21	8.6	27	225				1.8 3.00
22	7.4	27	230				<1.6 3.05
23	6.5	27	230				<1.4 3.00

Time: 30.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 40

Buenos Aires, Argentina (34.5° S, 58.5° W)							
September 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	>11.0	23	280				2.70
01	10.8	17	280				2.75
02	9.7	17	250				3.05
03	7.0	18	220			----	2.90
04	6.2	20	250			----	2.45
05	6.0	17	295			----	2.50
06	---	7.8	22	260		159 2.10	2.80
07	---	10.0	22	240		---	3.05
08	---	10.9	25	235		105	3.00
09	---	>12.1	22	230		109	2.95
10	(280)	>12.8	21	230	---	109	2.80
11	(270)	(13.5)	27	(245)	---	----	2.75
12	(295)	14.0	24	(260)	---	----	2.70
13	310	13.9	23	250	---	----	2.70
14	(300)	14.0	23	240	---	----	2.65
15	---	(13.9)	26	240	---	----	2.70
16	---	13.0	22	240		110	2.75
17	---	13.0	25	250		115 2.50	2.80
18	>12.7	24	250			----	2.90
19	>12.8	23	260			----	2.80
20	>12.0	23	250			----	2.75
21	>11.8	25	255			----	2.80
22	11.0	21	260			----	2.70
23	11.0	23	290			----	2.60

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 42

Trelew, Argentina (43.2° S, 65.3° W)							
September 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	(6.6)	23	360				2.40
01	(7.0)	23	360				2.35
02	(7.3)	23	330				2.50
03	7.0	23	300				2.60
04	6.4	22	280				2.45
05	>6.0	23	320				2.30
06	>6.2	22	310			1.95	2.45
07	>8.5	21	265			131 3.00	(3.00)
08	(9.7)	19	260			111 3.55	(3.00)
09	---	>9.7	16	255		109	----
10	---	>10.0	14	250		109	----
11	---	>10.0	15	(255)		109	----
12	(320)	>10.0	11	----		109	----
13	---	>9.8	8	----		109	4.6
14	---	>9.5	9	----		109	----
15	---	>9.8	13	(250)		109	4.5
16	---	>9.8	21	270		109	----
17	>9.6	24	270			115 3.20	3.6
18	>9.2	24	260			---	2.7
19	>7.5	24	260			----	----
20	>7.2	23	295			----	(2.60)
21	>7.5	22	300			----	(2.55)
22	>6.3	21	325			----	(2.45)
23	(6.5)	22	360			----	(2.40)

Time: 60.0°W.
Sweep: 1.3 Mc to 18.0 Mc in 15 seconds.

Table 43

Port Lockroy (64.8° S, 63.5° W) September 1959									
Time	h°F2	foF2—Count	h°F	foF1	h'E	foE	foEs	(M3000)F2	
00		5.3 21	345				1.1	2.25	
01		4.6 19	350			----	1.0	2.25	
02		4.3 17	360				1.2	2.25	
03		4.2 20	350				1.1	2.30	
04		3.8 21	350			----	1.0	2.40	
05		3.9 21	310			----		2.45	
06		4.7 24	295			1.50		2.75	
07		6.5 26	250			2.00		3.00	
08		8.3 22	240			2.50		3.15	
09		8.9 21	230			2.70	2.9	3.20	
10		10.0 25	230			3.00	3.1	3.10	
11		10.8 24	230			(3.10)		3.10	
12		10.8 25	230			3.10		3.10	
13		10.9 27	230			3.20		3.05	
14		10.9 27	235			3.00		3.10	
15		9.9 24	235			2.80		3.10	
16		9.6 26	240			2.50		3.15	
17		9.3 24	240			2.10		3.10	
18		8.9 21	245			1.80		3.05	
19		7.8 25	240			----		2.90	
20		7.8 20	245			----		2.70	
21		6.4 22	270			0.95		2.50	
22		(5.8) 21	310			----		2.50	
23		5.4 18	335			----		2.40	

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 45

Mawson (67.6° S, 62.9° E) September 1959									
Time	h°F2	foF2—Count	h°F	foF1	h'E	foE	foEs	(M3000)F2	
00		----	0 ---						
01		----	0 ---						
02		----	0 ---						
03		(6.5) 1	----					----	
04		(7.0) 5	(270)					(3.00)	
05		(8.2) 6	(225)					(3.00)	
06		(8.0) 7	(270)					(2.50)	
07		(9.5) 7	(250)					(2.80)	
08		9.0	15 250					2.75	
09		10.0	15 240					2.60	
10		11.0	17 270					2.70	
11		11.2	20 220					3.00	
12		9.2	20 200					3.00	
13		8.0	18 200					3.00	
14		7.2	17 250					3.00	
15		(6.5) 8	(220)					(3.00)	
16		----	0 ---						
17		----	0 ---						
18		----	0 ---						
19		----	0 ---						
20		----	0 ---						
21		----	0 ---						
22		----	0 ---						
23		----	0 ---						

Time: 0.0°.

Sweep: 1.0 Mc to 20.0 Mc in 15 seconds.

Table 47

Lindau/Harz, Germany (51.6° N, 10.1° E) August 1959									
Time	h°F2	foF2—Count	h°F	foF1	h'E	foE	fEs	(M3000)F2	
00		6.40 30	298				2.4	2.47	
01		5.96 30	319				2.5	2.41	
02		5.74 30	319				2.1	2.40	
03		5.40 30	311				2.2	2.45	
04		5.06 30	308			---	2.2	2.53	
05		5.23 31	300			---	2.6	2.66	
06		6.05 31	259			110	2.44	3.2	
07		6.65 31	240			106	2.77	4.2	
08	(392)	7.26 30	233	4.98	105	3.20	4.5	2.75	
09	364	7.68 31	239	5.30	102	3.44	4.9	2.74	
10	400	7.65 31	223	5.38	102	3.67	5.0	2.68	
11	410	8.15 30	230	5.50	102	3.74	4.8	2.65	
12	405	8.38 30	231	5.60	102	3.85	5.0	2.64	
13	420	7.95 31	225	5.55	102	3.82	4.9	2.65	
14	407	8.05 31	228	5.70	102	3.75	4.7	2.63	
15	390	8.17 30	229	5.52	103	3.69	4.7	2.68	
16	---	8.11 30	234	---	104	3.52	4.2	2.67	
17	---	7.78 30	246	---	106	3.18	4.3	2.73	
18		8.02 31	254		107	2.74	4.3	2.74	
19		8.61 30	268		---	2.31	3.6	2.79	
20		8.55 31	263		---	E	3.9	2.77	
21		8.15 30	263		---	---	3.8	2.72	
22		7.65 31	266				3.3	2.64	
23		7.09 30	286				2.5	2.54	

Time: 15.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 44

Wilkes Station (66.9° S, 110.5° E) September 1959									
Time	h°F2	foF2—Count	h°F	foF1	h'E	foE	foEs	(M3000)F2	
00		(5.2) 19	255	>3.4	125	>2.15		(2.70)	
01		(5.8) 20	250	>3.8	120	<2.70		(2.70)	
02		(6.0) 15	250	>3.8	120	>2.80		(2.55)	
03		(6.0) 16	250	(4.2)	120	<3.00		(2.70)	
04		(7.0) 10	235	>4.2	120	3.00		(2.50)	
05		(7.0) 11	(240)	>4.2	120	(3.00)		(2.40)	
06		(6.5) 10	<245	>4.1	120	(2.90)		(2.35)	
07		(6.9) 9	245	>4.0	120	<2.90		(2.45)	
08		(6.8) 10	(245)	>3.7	125	<2.70		(2.40)	
09		(6.4) 9	260	>3.6	125	(2.35)		(2.50)	
10		(5.6) 16	270	---	125	<1.80		(2.55)	
11		(5.6) 9	300		---	E		(2.60)	
12		(5.5) 8	275		---	E		(2.70)	
13		(5.7) 8	<275		---	E		(2.50)	
14		>4.1	10	<260	---	E		(2.80)	
15		>4.5	9	<250	---	E		(2.80)	
16		(4.2) 10	<255	---	---	E		(2.80)	
17		(3.4) 10	<260	---	---	E		(2.80)	
18		(3.6) 9	<250	---	---	E		(2.65)	
19		(3.7) 9	<250	---	---	E		(2.80)	
20		(4.0) 9	<255	---	---	E		(2.60)	
21		(4.0) 8	270	---	---	E	1.3	(2.75)	
22		(4.5) 16	<275	---	---	E		(2.70)	
23		(4.8) 14	275		125	(1.90)		(2.70)	

Time: 0.0°.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 or 27 seconds.

Table 46

Byrd Station (80.0° S, 120.0° W) September 1959									
Time	h°F2	foF2—Count	h°F	foF1	h'E	foE	foEs	(M3000)F2	
00		>5.4	9 (360)					----	
01		>6.0	11	<300				----	
02		>5.0	5	<365				----	
03		(4.7) 5	<395					----	
04		(4.5) 6	<340				>3.0	----	
05		(4.7) 8	<370					(2.70)	
06		(4.95) 10	<295					----	
07		(5.7) 14	<390					(2.90)	
08		6.0	13 (280)					----	
09		>6.4	16 (275)					----	
10		>6.85	22 275					(2.92)	
11		>7.0	25 270					(3.00)	
12		>6.9	20 265					----	
13		>6.5	21 275					----	
14		>6.0	19	<305				(2.90)	
15		>6.2	17 320					----	
16		>5.0	19 (325)					----	
17		>5.0	17 330					----	
18		>5.0	19 (310)				>2.0	----	
19		>5.0	11 (335)					----	
20		>5.0	15	<330			>1.9	----	
21		>5.2	13	<360				----	
22		>5.0	17 (360)					----	
23		>5.0	16 (360)					----	

Time: 120.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 48

El Cerillo, Mexico (19.3° N, 99.5° W) August 1959									
Time	h°F2	foF2—Count	h°F	foF1	h'E	foE	foEs	(M3000)F2	
00		7.8 30					2.2	2.70	
01		7.8 29					1.9	2.75	
02		7.6 30					1.8	2.80	
03		6.8 31					1.8	2.70	
04		6.6 31					1.8	2.70	
05		6.2 30					1.8	2.80	
06		6.0 30					2.0	3.10	
07		7.4 30					2.6	3.00	
08		8.8 30					3.4	2.80	
09		9.7 30					3.0	2.80	
10		10.3 30					4.6	2.60	
11		11.0 30					4.4	2.55	
12		11.6 31					4.7	2.60	
13		11.8 31					4.6	2.65	
14		12.2 31					4.3	2.70	
15		12.0 31					4.0	2.75	
16		11.4 31					3.8	2.80	
17		11.4 31					2.8	2.90	
18		11.0 31					2.9	2.80	
19		10.7 30					2.7	2.70	
20		9.6 28					2.0	2.70	
21		8.6 28					1.7	2.70	
22		8.5 28							
23		8.0 29							

Time: 90.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 49

Dakar, French W. Africa (14.8° N, 17.4° W)									
August 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00	(6,4)	3	380	---	---	---	3,0	---	
01	(5,7)	5	340	---	---	---	2,8	---	
02	(6,6)	7	300	---	---	---	3,0	(2,70)	
03	(5,7)	9	280	---	---	---	2,5	(2,90)	
04	6,0	11	270	---	---	---	2,4	2,70	
05	6,0	17	(265)	---	---	E	2,5	2,75	
06	5,4	19	245	---	---	E	2,8	2,90	
07	6,8	26	250	---	---	1,65	3,6	3,05	
08	8,6	28	230	110	2,70	4,8	3,20		
09	9,2	29	225	110	3,40	5,0	3,00		
10	10,4	30	215	100	3,75	4,8	2,80		
11	11,8	29	210	100	4,00	4,5	2,65		
12	12,7	31	205	100	4,20	4,4	2,60		
13	13,6	31	200	100	4,30	4,5	2,50		
14	---	14,1	31	200	100	4,20	4,5	2,50	
15	---	14,7	28	210	100	4,10	4,6	2,45	
16	---	14,7	29	215	100	3,85	4,2	2,45	
17	---	14,7	27	230	100	3,55	4,5	2,50	
18	---	14,3	22	<250	105	3,05	3,7	2,50	
19	---	14,2	18	270	125	2,15	4,4	(2,50)	
20	---	(12,7)	4	330	---	---	3,0	---	
21	---	(10,0)	2	400	---	---	2,8	---	
22	---	(7,0)	3	410	---	---	2,6	---	
23	---	(6,3)	5	400	---	---	3,0	(2,30)	

Time: 0,0°.
Sweep: 1,2 Mc to 17,0 Mc.

Table 51

Tahiti, Society Is. (17.7° S, 149.3° W)									
August 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00	8,3	16	235	---	---	---	2,3	2,95	
01	8,3	18	235	---	---	---	2,2	3,00	
02	7,9	19	230	---	---	E	2,0	3,10	
03	6,8	17	235	---	---	E	2,2	3,00	
04	5,5	17	240	---	---	E	2,2	2,90	
05	4,8	22	245	---	---	E	2,8	2,90	
06	5,9	19	300	---	---	E	2,7	2,85	
07	10,4	22	250	120	2,50	---	3,1	3,10	
08	12,7	22	245	110	3,30	---	---	3,15	
09	---	14,1	25	235	105	3,65	---	3,15	
10	(265)	13,8	26	230	105	3,90	---	2,90	
11	---	12,4	26	220	105	4,00	---	2,85	
12	---	13,0	25	210	105	4,00	---	2,70	
13	(360)	12,5	23	220	---	105	3,85	3,9	
14	(385)	12,1	27	230	---	105	3,75	2,65	
15	(365)	12,5	24	245	---	105	3,60	2,65	
16	---	13,1	25	245	115	3,30	---	2,65	
17	---	13,0	25	255	125	2,60	3,1	2,70	
18	---	13,5	25	275	---	E	3,1	2,75	
19	---	14,0	19	205	---	E	3,1	2,75	
20	---	15,0	13	250	---	E	2,9	(2,75)	
21	---	15,5	14	240	---	E	2,7	(2,90)	
22	---	14,0	20	230	---	---	2,8	3,00	
23	---	11,5	13	230	---	---	2,4	3,00	

Time: 150,0°W.
Sweep: 1,2 Mc to 17,0 Mc.

Table 53

Johannesburg, Union of S. Africa (26,1° S, 28,1° E)									
August 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00	3,3	31	(260)	---	---	---	<1,8	2,80	
01	3,1	31	---	---	---	---	1,6	2,75	
02	3,1	31	---	---	---	---	1,7	2,75	
03	3,1	31	---	---	---	---	<1,3	2,90	
04	3,1	31	295	---	---	---	1,6	2,80	
05	2,9	31	---	---	---	---	<1,4	2,85	
06	3,4	30	270	---	---	---	<1,8	2,85	
07	7,2	31	230	---	---	2,1	---	3,30	
08	---	9,6	31	225	---	2,9	---	3,30	
09	(240)	10,7	31	220	---	3,4	---	3,10	
10	(255)	11,6	31	215	---	3,7	3,8	3,00	
11	(250)	11,9	31	210	---	3,9	4,0	2,95	
12	275	11,8	31	210	5,2	4,0	4,3	2,90	
13	(280)	11,7	31	210	---	3,9	4,2	2,00	
14	---	11,2	30	210	---	3,8	4,2	2,80	
15	---	11,1	30	225	---	3,6	4,1	2,75	
16	---	10,0	31	230	---	3,2	3,7	2,80	
17	---	11,0	31	240	---	2,7	3,1	2,90	
18	---	10,6	31	235	---	1,7	2,4	2,95	
19	---	8,0	31	220	---	---	2,1	3,10	
20	---	6,8	31	220	---	---	2,0	3,10	
21	---	5,3	31	230	---	---	1,8	3,10	
22	---	4,2	31	230	---	---	1,7	3,05	
23	---	3,7	31	(220)	---	---	<1,7	2,95	

Time: 30,0°E.
Sweep: 1,0 Mc to 16,0 Mc in 7 seconds.

Table 50

Djibouti, French Somaliland (11,6° N, 43,2° E)									
August 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00	---	0	---	---	---	---	---	2,1	
01	(6,2)	1	(260)	---	---	---	---	1,9	
02	(5,9)	1	(270)	---	---	---	---	2,1	
03	(7,6)	2	(240)	---	---	---	---	1,8	
04	(6,2)	4	(230)	---	---	---	---	1,8	
05	(5,4)	8	(220)	---	---	---	---	1,8	(3,25)
06	6,4	11	250	---	---	1,40	1,9	3,05	
07	(9,7)	14	240	---	110	2,70	3,6	3,10	
08	11,2	13	230	---	110	3,35	3,9	2,75	
09	(11,6)	9	220	---	105	3,75	6,6	(2,55)	
10	(11,7)	7	220	---	100	4,10	6,7	(2,30)	
11	---	(11,6)	6	<220	---	100	4,20	6,7	(2,30)
12	---	(11,4)	6	220	---	---	4,30	6,7	(2,25)
13	---	(10,9)	6	215	---	---	(4,20)	6,7	(2,20)
14	---	(11,6)	6	220	---	---	(4,15)	6,6	(2,25)
15	---	(12,8)	2	220	---	105	3,90	6,3	---
16	---	(14,2)	2	230	---	105	3,60	5,2	---
17	---	(11,6)	5	245	---	105	(3,10)	4,3	---
18	---	(10,0)	1	270	---	110	(2,35)	3,7	---
19	---	(9,7)	4	330	---	---	E	---	---
20	---	(9,1)	4	---	---	---	---	---	(2,05)
21	---	(7,5)	1	---	---	---	---	---	---
22	---	---	0	---	---	---	---	1,7	---
23	---	---	0	---	---	---	---	1,8	---

Time: 45,0°E.
Sweep: 1,25 Mc to 20,0 Mc.

Table 52

Tananarive, Madagascar (18,0° S, 47,5° E)									
August 1959									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00	---	3,5	26	250	---	---	2,0	2,90	
01	---	3,4	24	270	---	E	1,8	2,70	
02	---	3,3	25	<280	---	E	1,6	2,65	
03	---	3,0	26	(295)	---	E	1,7	2,65	
04	---	3,2	28	(300)	---	E	1,6	2,60	
05	---	3,0	26	(305)	---	E	1,6	2,60	
06	---	4,6	28	290	---	E	1,8	2,75	
07	---	9,4	22	265	120	2,60	---	3,05	
08	---	11,0	25	255	115	3,20	---	2,95	
09	---	11,7	28	250	115	3,60	---	2,90	
10	---	12,4	22	240	115	3,90	---	2,80	
11	---	12,1	23	250	110	4,00	---	2,70	
12	---	12,0	16	(250)	110	(4,10)	---	2,60	
13	---	11,5	21	(245)	---	115	(4,00)	4,0	2,55
14	---	11,2	17	245	---	115	3,80	4,0	2,50
15	---	11,0	18	250	---	115	3,80	4,0	2,45
16	---	10,7	23	260	120	3,15	3,6	2,50	
17	---	10,7	21	270	<130	2,50	3,4	2,60	
18	---	10,7	23	270	---	---	3,1	2,70	
19	---	(9,2)	25	255	---	---	3,0	2,80	
20	---	0,0	24	260	---	---	2,5	2,80	
21	---	7,1	23	260	---	---	2,3	2,80	
22	---	6,2	23	260	---	---	2,1	2,90	
23	---	5,3	25	250	---	---	2,0	2,90	

Time: 45,0°E.
Sweep: 1,25 Mc to 20,0 Mc.

Table 54

Trelew, Argentina (43,2° S, 65,3° W)								August 1959
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5,4	27	360				2,40
01		5,2	25	340				2,40
02		5,4	26	330				2,45
03		>5,5	27	315				2,50
04		5,2	27	305				2,45
05		4,8	24	295				2,35
06		4,9	26	320				2,50
07		5,8	25	290	181	2,10		2,80
08		>8,9	20	260	111	3,30	3,7	(3,05)
09	---	>9,3	18	255	---	107	3,50	4,0
10	---	(9,2)	15	245	---	105	----	----
11	(290)	>10,0	13	(250)	---	105	----	4,9
12	(290)	>9,8	15	(225)	---	105	----	4,8
13	---	>9,9	8	(250)	---	107	----	----
14	---	>9,9	9	(250)	---	105	----	----
15	---	>9,5	17	260	---	109	----	4,4
16		(9,0)	20	250		109	----	4,1
17		(8,9)	23	260	113	3,00	3,4	3,05
18		>7,6	24	240	---	2,10	3,1	3,00
19		>6,7	26	250			3,7	(2,90)
20		>6,3	27	260			3,0	2,85
21		(5,8)	28	260			3,4	2,80
22		>5,2	26	280				2,60
23		>5,2	23	340			2,3	2,40

Table 55

Port Lockroy (64.8° S, 63.5° W) August 1959									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00		2,8	20	370	----	----	----	2,30	
01		2,8	18	370	----	----	----	2,30	
02		2,7	23	375	----	----	----	2,40	
03		2,8	22	370	----	----	----	2,40	
04		2,7	22	365	----	----	----	2,50	
05		2,5	24	345	----	----	----	2,30	
06		2,3	22	310	----	----	----	2,40	
07		>3,0	22	280		1,55		<2,70	
08		5,5	21	240		1,90		2,90	
09		7,4	23	230		2,45		3,20	
10		8,8	28	220		2,60	2,9	3,15	
11		9,8	26	220		2,80	2,8	3,30	
12		10,0	27	230		2,90		3,30	
13		9,4	27	225		2,65	2,7	3,35	
14		9,2	27	220		2,50		3,30	
15		8,8	26	230		2,30		3,30	
16		8,2	28	230		(2,00)		3,35	
17		7,6	24	225		1,65		3,30	
18		6,0	24	225		----	1,3	3,15	
19		4,1	25	235		----		3,00	
20		3,8	22	270		----		2,60	
21		3,4	21	315		----		<2,45	
22		3,0	22	350		----		2,40	
23		2,8	21	360		----		2,40	

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 57

Tsumeb, South W. Africa (19.2° S, 17.7° E) September 1958									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00		7,70	27	230	---	----	----	2,81	
01		6,60	27	240	---	----	----	2,81	
02		5,62	28	245	---	----	----	2,77	
03		5,36	29	258	---	----	----	2,78	
04		5,00	29	245	---	----	----	2,93	
05		4,47	29	246	---	----	----	2,90	
06		7,85	28	240	128	1,81		3,09	
07		10,58	30	231	114	2,96		3,16	
08		11,67	30	225	109	3,51		2,95	
09		12,58	30	220	---	3,87		2,84	
10		12,86	30	215	---	4,10		2,70	
11		13,00	29	212	---	4,22		2,62	
12	---	12,92	30	210	---	4,22		2,52	
13	---	12,80	30	210	---	4,15		2,47	
14	---	12,78	30	220	---	3,94		2,47	
15		12,73	30	235	---	3,67	4,0	2,48	
16		12,59	29	242	110	3,22	4,0	2,51	
17		12,46	30	255	114	2,58	3,4	2,56	
18		12,45	30	260	---	----	2,5	2,70	
19		12,06	30	252	---	----	2,2	2,76	
20		11,68	30	240	---	----	1,7	2,78	
21		11,00	30	240	---	----	1,8	2,78	
22		10,50	29	245	---	----	1,8	2,88	
23		9,35	29	235	---	----		2,93	

Time: 15.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 59

Rabat, Morocco (30.9° N, 6.8° W) August 1958									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00		>9,0	31	<320			3,2	(2,45)	
01		>9,0	31	<315			3,1	2,55	
02		(9,0)	29	<305			2,6	(2,55)	
03		(0,4)	31	<300			2,2	2,60	
04		7,6	31	<295			2,0	2,60	
05		7,2	30	<205			2,0	2,60	
06	---	8,0	30	255	130	1,90	2,1	2,85	
07	---	9,0	29	<240	100	2,80	3,2	3,15	
08	(250)	9,1	29	230	100	3,40	3,0	3,20	
09	(375)	9,2	20	(220)	100	3,70	4,4	2,90	
10	(370)	9,5	28	210	6,3	100	3,90	4,2	
11	370	10,1	30	210	6,3	100	4,00	2,60	
12	395	10,3	30	<230	6,3	100	----	2,60	
13	390	10,9	29	<230	6,3	100	----	2,55	
14	390	11,0	29	(220)	6,0	100	(4,20)	2,60	
15	370	11,0	30	230	6,0	100	4,00	2,60	
16	355	10,7	30	230	6,0	100	3,70	2,65	
17	335	10,2	30	240	---	100	3,30	4,0	
18		>10,0	30	<255	100	2,70	4,0	2,80	
19	(9,6)	30	<275		140	1,80	3,4	2,75	
20	9,1	31	<270		---	----	2,9	2,60	
21	9,0	30	<295		---	----	2,4	2,55	
22	9,1	31	<300		---	----	2,6	2,50	
23	(9,2)	31	<300		---	----	3,1	(2,50)	

Time: 0.0°.

Sweep: 1.5 Mc to 16.5 Mc.

Table 56

Hollandia, Netherlands New Guinea (2.5° S, 140.8° E) September 1958									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00	---	(12,5)	1	<250	---	----	----	<6,8	----
01	---	(12,5)	2	---	---	----	----	<9,5	----
02	(430)	(12,6)	3	---	---	----	----	<10,0	----
03	440	----	0	---	---	----	----	<10,3	----
04	450	(12,8)	1	---	---	----	----	<10,0	----
05	455	(13,0)	1	---	---	----	----	<10,0	----
06	450	(13,1)	1	---	---	----	----	<10,0	----
07	(445)	(12,4)	1	240	---	110	----	<3,8	----
08	---	(12,1)	1	250	---	----	----	3,0	----
09		(13,0)	2	330				2,3	----
10		(13,5)	2	355					----
11		(14,0)	1	300					----
12		----	0	250					----
13		(13,2)	2	210					----
14		(12,4)	8	200				(3,10)	
15		10,8	10	200				3,05	
16		9,6	11	220				2,80	
17		10,4	13	220				2,95	
18		9,8	16	220				3,05	
19		10,0	17	215				3,30	
20		8,5	16	210				3,40	
21		10,4	20	240		130	2,8	3,20	
22		12,8	16	225		110	3,2	3,05	
23		(13,3)	3	230		100	----	<4,8	----

Time: 0.0°.

Sweep: 1.4 Mc to 20.0 Mc in 40 seconds.

Table 58

Poitiers, France (46.6° N, 0.3° E) August 1958									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00		(7,6)	30	<320			2,6	(2,30)	
01		(7,4)	30	<335			2,8	(2,35)	
02		(7,0)	30	<315			2,4	(2,40)	
03		6,7	30	<315			2,4	2,40	
04		(6,2)	30	(320)			2,2	(2,40)	
05		6,4	30	300	---	E	2,6	2,55	
06	<345	7,3	30	<260	---	115	2,40	3,2	2,70
07	360	(7,6)	29	240	(4,9)	110	3,00	3,8	2,65
08	405	(8,4)	31	(235)	(5,6)	105	3,45	4,5	(2,65)
09	400	8,8	30	<245	(5,8)	105	3,70	4,8	2,60
10	385	>9,0	30	<235	6,0	105	3,90	4,8	(2,60)
11	415	>9,0	29	(235)	6,3	105	4,00	4,6	2,50
12	400	9,2	29	<235	6,5	105	4,00	4,5	2,50
13	410	(9,2)	31	230	(6,3)	105	4,00	4,2	(2,50)
14	395	9,0	31	235	(6,2)	105	4,00	4,2	2,50
15	385	(9,0)	29	235	6,1	105	3,90	4,2	(2,50)
16	380	(9,0)	30	245	(5,8)	110	3,55	4,3	(2,55)
17	350	9,0	30	(250)	(5,2)	110	3,10	3,8	(2,60)
18	---	>9,0	30	(270)		115	2,35	4,4	(2,55)
19	---	>9,0	31	275		---	E	3,4	----
20		>8,5	31	<270		---	E	3,6	(2,50)
21		>8,0	31	<290				3,6	(2,40)
22		>8,0	30	<300				3,1	(2,30)
23		(8,0)	30	<315				3,7	(2,30)

Time: 0.0°.

Sweep: 1.5 Mc to 16.5 Mc.

Table 60

Dakar, French W. Africa (14.7° N, 17.4° W)							August 1958	
Time	h°F2	foF2—Count	h°F	fof f	h°E	foE	foEs	(M3000)F2
00		(7,9)	3	<360	---	----	2,7	----
01		(6,6)	2	330	---	----	2,3	----
02		(6,4)	7	300	---	----	2,5	(2,65)
03		6,7	12	270	---	----		(2,70)
04		6,7	18	245	---	----	3,3	2,95
05		6,5	21	220	---	----	3,0	2,95
06		5,9	16	230	---	E	2,8	3,00
07		7,3	17	235	---	(1,90)	3,3	3,05
08		9,4	18	215	105	2,90	3,3	3,20
09		>10,0	16	205	100	----	4,3	2,95
10		11,0	12	195	95	(3,85)	4,2	(2,70)
11	---	12,2	14	(190)	95	----	(4,9)	2,50
12	---	13,7	13	---	---	----	(4,8)	(2,55)
13	(390)	(14,0)	7	---	---	----		----
14	(435)	(14,0)	4	---	---	----		----
15	(440)	>14,0	4	(185)	---	100	----	----
16	---	>14,0	7	200	95	(3,95)		----
17	---	>14,0	11	205	100	(3,60)		----
18		>14,0	8	220	100	3,00		----
19		>13,8	6	250	115	2,00	3,2	----
20		(12,2)	3	340	---	E	3,1	----
21		(11,3)	4	415	---	----	2,0	----
22		>9,5	1	400	---	----		
23		----	0	380	---	----		

Table 61

Paramaribo, Surinam (5.8° N, 55.2° W) August 1958									
Time	h'F2	foF2—Count	h'F	fof1	h'E	foE	fEs	(M3000)F2	
00	11.0	20 350					3.0	2.30	
01	>11.5	25 325					2.7	2.40	
02	11.8	26 300					2.8	2.50	
03	10.6	25 290					2.3	2.60	
04	9.6	27 270					2.0	2.60	
05	9.4	28 270					2.3	2.60	
06	9.3	29 275					2.4	2.75	
07	8.7	29 255					2.0	2.90	
08	7.8	29 250					2.2	2.00	
09	7.0	29 250			---	---	2.4	2.70	
10	8.2	29 250			100	2.2	3.00		
11	9.6	27 240			100	3.2	2.90		
12	---	10.3	20 230	---	100	3.7	2.70		
13	---	11.6	27 (240)	---	105	4.1	2.55		
14	375	12.4	27 (250)	6.4	105	4.3	2.55		
15	400	13.0	20 <275	(7.0)	105	4.4	2.50		
16	405	13.0	27 <280	7.0	110	4.4	2.45		
17	405	13.2	28 <260	6.4	105	4.4	2.40		
18	400	12.8	29 <250	6.6	110	4.2	4.4	2.45	
19	405	12.3	29 245	6.4	110	3.8	4.5	2.40	
20	400	11.7	29 <250	---	100	3.4	4.7	2.35	
21	---	11.4	20 260	---	100	2.8	4.7	2.35	
22	---	10.8	20 300	---	---	1.7	4.3	2.35	
23	---	10.4	25 350	---	---		4.0	2.30	

Time: 0.0°.
Sweep: 1.4 Mc to 20.0 Mc in 40 seconds.

Table 63

Tahiti, Society Is. (17.7° S, 149.3° W) August 1958									
Time	h'F2	foF2—Count	h'F	fof1	h'E	foE	fEs	(M3000)F2	
00	12.0	16 220			---	---	2.2	3.00	
01	9.5	19 230			---	E	2.3	3.00	
02	8.8	14 230			---	---	2.2	3.10	
03	7.0	16 230			---	---	2.5	2.80	
04	6.4	17 250			---	(1.00)	2.8	2.80	
05	5.4	17 265			---	E	2.6	2.80	
06	5.9	19 310			---	1.10	3.1	2.65	
07	---	10.8	21 255		120	2.60	2.9	3.00	
08	---	13.6	22 245		110	3.30		3.00	
09	---	15.0	26 240		105	3.70		2.95	
10	(290)	15.0	24 230		105	4.00		2.90	
11	(305)	14.0	25 225		105	(4.10)		2.75	
12	360	13.6	22 240		105	4.15		2.65	
13	380	13.9	22 235	7.2	105	4.00	4.2	2.60	
14	400	13.4	21 220	6.8	105	3.80	4.4	2.55	
15	(370)	14.0	21 250		110	3.65	4.2	2.55	
16	---	14.0	22 250		110	3.20	3.5	2.55	
17	---	13.7	24 260		125	3.1	3.1	2.60	
18	---	14.2	16 290		---	E	3.1	2.60	
19	---	15.4	19 315		---	---	3.3	(2.60)	
20	0	22 275			---	---	3.1	(2.70)	
21	0	24 235			---	---	2.8	(2.80)	
22	0	21 235			---	---	2.2	(2.90)	
23	---	16.0	19 225		---	---	2.4	2.90	

Time: 150.0°W.
Sweep: 1.2 Mc to 17.0 Mc.

Table 65

Tsumeb, South W. Africa (19.2° S, 17.7° E) August 1958									
Time	h'F2	foF2—Count	h'F	fof1	h'E	foE	fEs	(M3000)F2	
00	4.90	29 245			---	---	1.6	2.80	
01	4.20	31 247			---	---		2.85	
02	3.54	29 242			---	---		2.66	
03	3.22	28 252			---	---		2.84	
04	3.05	29 255			---	---		2.89	
05	2.90	30 260			---	---		2.83	
06	4.94	31 260			---	---		2.83	
07	9.10	31 235			117	2.57	1.9	3.24	
08	10.70	30 230			110	3.29		3.08	
09	12.06	20 225			109	3.75		2.92	
10	12.42	26 220			---	4.00		2.89	
11	---	12.05	29 215	---	---	4.17		2.75	
12	---	11.99	30 210	---	---	4.16		2.66	
13	---	11.62	29 220	---	---	4.08		2.61	
14	---	11.42	30 221	---	---	3.87	4.2	2.56	
15	---	11.46	30 230	---	---	3.61	4.3	2.55	
16	---	11.40	30 240	---	107	3.20	3.9	2.62	
17	---	11.50	31 255	---	120	2.42	3.7	2.71	
18	---	11.50	31 250	---	---	---	3.3	2.88	
19	---	10.24	31 222	---	---	---	2.6	2.95	
20	---	8.60	31 230	---	---	---	2.4	2.91	
21	---	7.66	31 240	---	---	---	1.9	2.89	
22	---	7.03	30 235	---	---	---	1.5	2.86	
23	---	5.58	29 234	---	---	---		2.82	

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 62

Bangui, French Equatorial Africa (4.6° N, 18.6° E) August 1958									
Time	h'F2	foF2—Count	h'F	fof1	h'E	foE	fEs	(M3000)F2	
00	>9.0	1 290						2.0	
01	---	0 250						2.0	
02	(0.0)	6 240						2.2	
03	(7.6)	8 230						2.5	(2.05)
04	7.2	13 225			---	---		2.8	2.95
05	5.9	17 230			---	---		3.2	3.00
06	0.4	20 260			135	1.80		3.4	2.90
07	12.0	23 245			105	3.10		4.4	3.00
08	13.2	21 240			100	3.70		4.5	2.85
09	14.4	27 225			105	4.00		4.5	2.70
10	---	14.0	25 210		105	4.25			2.50
11	---	14.0	24 210		105	4.40		4.5	2.30
12	---	(13.7)	14 205		105	4.45			---
13	---	>13.2	9 205		100	4.40			---
14	---	>13.2	6 205		105	4.25			---
15	---	(12.6)	4 210		105	4.00			---
16	---	>11.5	5 230		105	3.50			---
17	---	>11.9	8 255		110	2.80	3.2		
18	---	>11.4	12 300		---	E	2.0	---	
19	---	>10.5	6 405		---	E			---
20	---	---	0		---				
21	---	---	0 (380)		---				
22	---	---	0		---				1.8
23	---	---	0		---				

Time: 15.0°E.
Sweep: 1.36 Mc to 17.2 Mc.

Table 64

Tananarive, Madagascar (18.8° S, 47.5° E) August 1958									
Time	h'F2	foF2—Count	h'F	fof1	h'E	foE	fEs	(M3000)F2	
00	5.3	26 240			---	E	1.0	3.00	
01	4.7	25 <240			---	E	2.5	2.95	
02	4.0	27 230			---	E	2.5	2.90	
03	3.6	20 <245			---	E	2.6	2.90	
04	3.4	27 250			---	E	2.5	2.80	
05	3.3	27 260			---	E	2.2	2.90	
06	4.9	25 260			---	E	1.8	2.90	
07	>9.0	23 230			110	2.40		3.30	
08	11.2	24 225			105	3.25		3.10	
09	12.1	20 220			100	(3.65)		3.05	
10	12.4	22 215			100	(4.00)		3.00	
11	---	12.2	27 <210		100	---		2.80	
12	(400)	11.9	29 210	---	100	---	(3.9)	2.75	
13	(380)	11.6	23 210	---	100	---	(4.6)	2.70	
14	---	11.4	22 220	---	100	(3.90)	4.4	2.60	
15	---	(11.0)	19 225	---	105	3.60	4.0	(2.60)	
16	---	10.7	23 240		110	3.20	3.5	2.70	
17	---	10.4	24 245		120	2.35	2.9	2.75	
18	>10.3	24 240			---	---	2.8	2.85	
19	9.0	23 230			---	---	2.5	2.90	
20	8.5	21 240			---	E	1.8	2.90	
21	8.0	23 240			---	E	2.4	3.05	
22	>5.9	23 230			---	E	1.8	3.00	
23	5.6	25 240			---	E	2.5	3.00	

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc.

Table 66

Ocepcion I. (63.0° S, 60.7° W) August 1958									
Time	h'F2	foF2—Count	h'F	fof1	h'E	foE	fEs	(M3000)F2	
00	4.0	24 350						2.40	
01	3.0	27 360						2.40	
02	3.8	20 <370						2.40	
03	3.8	27 (350)						2.40	
04	3.6	27 <340						2.45	
05	3.5	27 (325)						2.45	
06	3.4	26 <275						2.60	
07	3.4	26 <245						2.70	
08	---	4.5	31 <240					2.90	
09	---	7.6	30 200	(4.6)	---			3.25	
10	---	10.0	24 200		---			3.50	
11	---	10.7	19 200		---			3.40	
12	---	11.4	25 <200		---			3.40	
13	---	(11.1)	8 195		---			(3.45)	
14	(235)	11.0	23 200		---			3.30	
15	---	10.6	25 200		---			3.40	
16	---	10.2	26 200		---			3.40	
17	---	9.0	19 200		---			3.40	
18	---	8.1	21 200		---			3.30	
19	---	6.5	27 200		---			3.30	
20	---	5.1	25 <220		---			3.05	
21	---	4.3	24 (230)		---			2.80	
22	---	4.2	19 <285		---			2.60	
23	---	4.1	19 325		---			2.50	

Table 67

Port Lockroy (64.8° S, 63.5° W) August 1958							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	3.0	24	360	---	---	1.3	2.30
01	3.0	26	370	---	---	1.1	2.30
02	3.0	26	375	---	---	---	2.30
03	2.8	21	365	---	---	---	2.40
04	2.7	23	345	---	---	---	2.35
05	2.5	23	330	---	---	---	2.50
06	2.5	27	300	---	---	1.2	2.55
07	>3.5	26	255	---	---	1.4	2.45
08	3.8	28	230	---	1.7	2.2	<3.10
09	3.5	28	215	---	(2.2)	2.6	3.20
10	10.2	20	215	---	(2.6)	3.2	3.20
11	10.5	29	220	---	(2.8)	4.1	3.15
12	11.0	30	225	---	(2.9)	3.2	3.25
13	10.3	29	220	---	(2.0)	3.0	3.10
14	10.2	27	220	---	2.6	3.0	3.20
15	9.3	31	225	---	(2.4)	2.6	3.15
16	8.8	29	225	---	2.2	2.3	3.20
17	7.4	30	220	---	---	1.8	3.10
18	6.2	29	215	---	---	2.2	3.15
19	4.9	29	225	---	---	1.7	2.90
20	(4.1)	28	255	---	---	>1.3	(2.70)
21	(3.0)	27	<300	---	---	1.5	2.50
22	3.7	26	335	---	---	1.1	2.40
23	3.3	27	355	---	---	1.6	2.35

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 69

Freiburg, Germany (48.1° N, 7.0° E) August 1955							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	4.5	30	275	---	---	2.3	2.92
01	4.1	30	280	---	---	2.0	2.86
02	3.8	29	270	---	---	2.0	2.86
03	3.6	30	200	---	---	2.2	2.86
04	3.3	31	280	---	---	2.2	2.90
05	(285)	3.6	29	265	---	2.0	3.03
06	300	4.5	29	230	---	118	2.05
07	310	5.0	27	225	---	3.90	111
08	310	5.8	28	220	---	4.05	109
09	300	5.9	29	215	---	4.30	109
10	320	5.7	30	205	---	4.45	107
11	330	6.0	30	210	---	4.50	105
12	330	5.8	31	210	---	4.50	107
13	325	5.9	31	210	---	4.55	107
14	340	5.6	30	210	---	4.40	107
15	330	5.6	30	220	---	4.40	109
16	320	5.5	30	225	---	4.20	109
17	315	5.5	30	230	---	3.90	112
18	290	6.2	31	250	---	---	118
19	(280)	7.0	26	265	---	---	---
20	---	7.1	31	250	---	---	---
21	---	6.6	30	240	---	---	---
22	---	5.7	29	245	---	---	---
23	---	4.9	30	250	---	---	---

Time: Local.

Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 71

Lulea, Sweden (65.6° N, 22.1° E) July 1953							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	---	3.7	19	260	---	---	2.6
01	---	3.7	15	250	---	---	E
02	---	3.7	15	250	---	---	2.5
03	---	3.7	15	250	---	---	2.5
04	400	3.7	17	240	---	3.1	120
05	---	3.7	17	240	---	3.1	120
06	400	4.4	13	205	---	3.7	110
07	---	4.4	13	205	---	3.7	110
08	465	(4.5)	9	200	---	3.8	---
09	---	(4.5)	9	200	---	3.8	---
10	400	4.6	12	200	---	4.0	---
11	---	4.6	12	200	---	4.0	---
12	410	4.6	15	200	---	4.0	---
13	---	4.6	15	200	---	4.0	---
14	400	4.5	17	200	---	4.0	---
15	---	4.5	17	200	---	4.0	---
16	360	4.5	14	210	---	3.8	---
17	---	4.5	14	210	---	3.8	---
18	360	4.5	20	225	---	3.5	<120
19	---	4.5	20	225	---	3.5	<120
20	(455)	4.2	25	245	---	3.5	---
21	---	4.2	25	245	---	3.5	---
22	---	4.0	18	250	---	---	---
23	---	4.0	18	250	---	---	---

Time: 15.0°E.

Sweep: 1.5 Mc to 10.0 Mc in 9 minutes, automatic operation.

Table 68

Tananarive, Madagascar (18.8° S, 47.5° E) July 1958							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	---	3.4	26	250	---	E	2.6
01	---	3.1	27	250	---	E	2.7
02	---	3.0	25	250	---	E	2.8
03	---	2.7	26	255	---	E	2.7
04	---	2.6	27	<265	---	E	2.5
05	---	2.6	26	260	---	E	1.7
06	---	4.0	25	250	---	E	2.5
07	---	8.4	30	230	---	120	2.15
08	(11.0)	22	230	---	---	110	3.00
09	---	12.2	27	228	---	105	3.40
10	---	12.0	30	220	---	100	(3.65)
11	---	11.4	30	215	---	100	(3.75)
12	---	10.8	24	220	---	100	---
13	---	10.5	25	<225	---	100	(3.90)
14	---	(10.4)	23	230	---	105	(3.65)
15	---	10.4	26	225	---	110	3.40
16	---	10.0	30	235	---	115	2.95
17	---	9.9	30	240	---	---	2.25
18	---	9.1	26	230	---	---	3.4
19	---	7.1	25	225	---	---	3.1
20	---	>5.8	28	240	---	---	3.0
21	---	>5.9	26	235	---	---	2.8
22	---	4.5	26	225	---	---	2.6
23	---	3.5	25	230	---	---	2.8

Time: 45.0°E.

Sweep: 1.25 Mc to 20.0 Mc in 10 minutes.

Table 70

Lulea, Sweden (65.6° N, 22.1° E) July 1954							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	---	(3.5)	21	250	---	---	2.3
01	---	(3.5)	21	250	---	---	2.3
02	---	3.3	23	250	---	---	2.9
03	---	3.3	23	250	---	---	2.9
04	355	3.7	15	210	---	3.0	125
05	---	3.7	15	210	---	3.0	125
06	385	4.2	13	200	---	3.4	105
07	---	4.2	13	200	---	3.4	105
08	300	4.3	16	200	---	3.7	100
09	---	4.3	16	200	---	3.7	100
10	380	4.4	19	200	---	3.9	---
11	---	4.4	19	200	---	3.9	---
12	400	4.4	14	200	---	4.0	---
13	---	4.4	14	200	---	4.0	---
14	375	4.3	20	200	---	3.9	100
15	---	4.3	20	200	---	3.9	100
16	360	4.3	22	200	---	3.7	100
17	---	4.3	22	200	---	3.7	100
18	(310)	4.2	22	210	---	3.3	110
19	---	4.2	22	210	---	3.3	110
20	---	3.8	22	220	---	---	1.8
21	---	3.8	22	220	---	---	1.8
22	---	3.7	21	245	---	---	---
23	---	3.7	21	245	---	---	---

Time: 15.0°E.

Sweep: 1.5 Mc to 10.0 Mc in 9 minutes, automatic operation.

Table 72

Lulea, Sweden (65.6° N, 22.1° E) November 1952							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	---	(2.0)	6	325	---	---	3.0
01	---	(2.0)	6	325	---	---	3.0
02	---	(2.5)	5	305	---	---	2.5
03	---	(2.5)	5	305	---	---	2.5
04	---	(2.8)	12	290	---	---	---
05	---	(2.8)	12	290	---	---	---
06	---	(2.0)	7	---	---	---	---
07	---	(2.0)	7	---	---	---	---
08	---	3.5	22	225	---	---	2.5
09	---	3.5	22	225	---	---	2.5
10	---	5.2	23	210	---	140	1.9
11	---	5.2	23	210	---	140	1.9
12	---	6.0	23	220	---	130	2.0
13	---	6.0	23	220	---	130	2.0
14	---	5.0	23	210	---	---	1.7
15	---	5.0	23	210	---	---	1.7
16	---	(3.9)	20	225	---	---	---
17	---	(3.9)	20	225	---	---	---
18	---	(2.3)	13	235	---	---	2.0
19	---	(2.3)	13	235	---	---	2.0
20	---	(2.0)	5	---	---	---	2.6
21	---	(2.0)	5	---	---	---	2.6
22	---	(2.5)	4	280	---	---	2.6
23	---	(2.5)	4	280	---	---	2.6

Time: 15.0°E.

Sweep: 1.5 Mc to 10.0 Mc in 9 minutes, automatic operation.

ISCOMM-NBS-BL

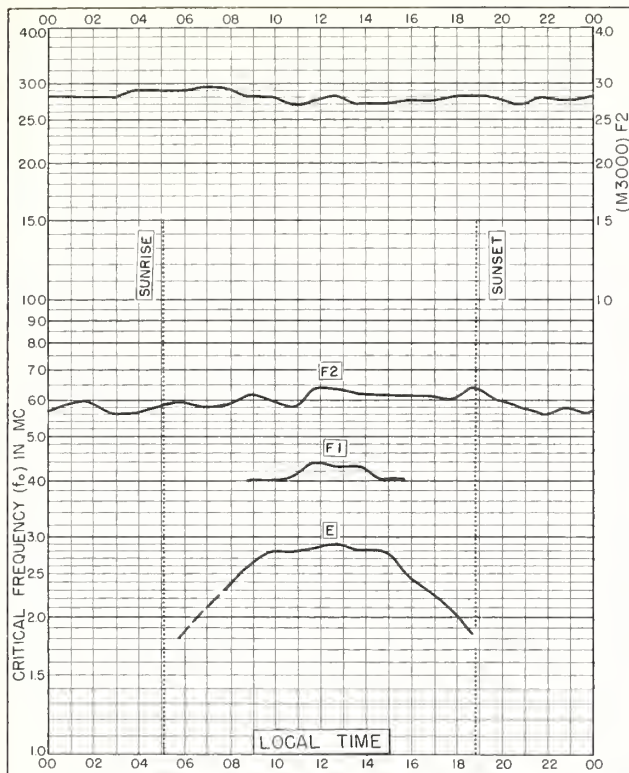


Fig. 1. RESOLUTE BAY, CANADA
74.7°N, 94.9°W SEPTEMBER 1960

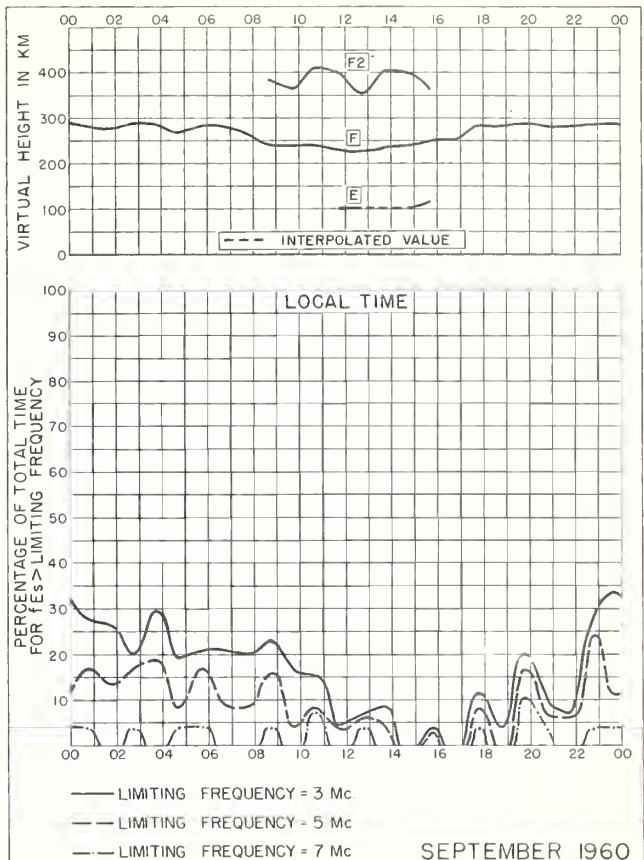


Fig. 2. RESOLUTE BAY, CANADA

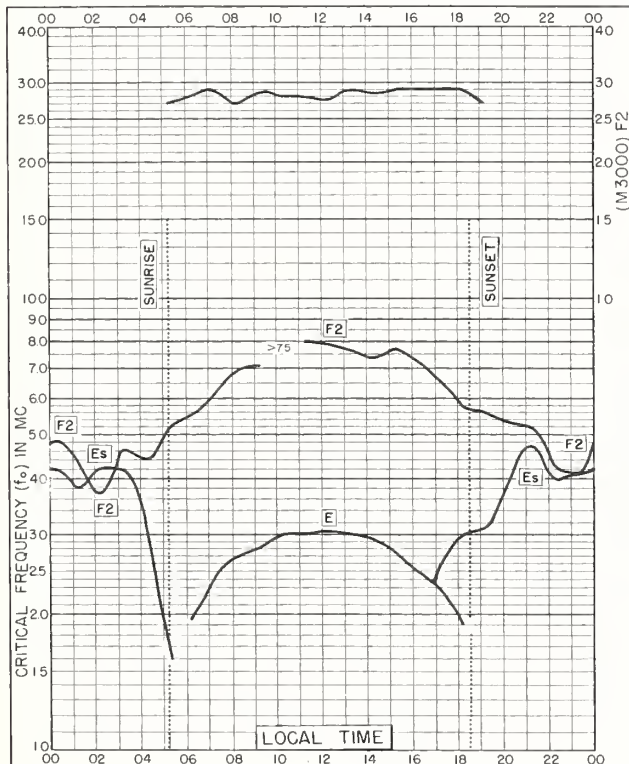


Fig. 3. TROMSØ, NORWAY
69.7°N, 19.0°E SEPTEMBER 1960

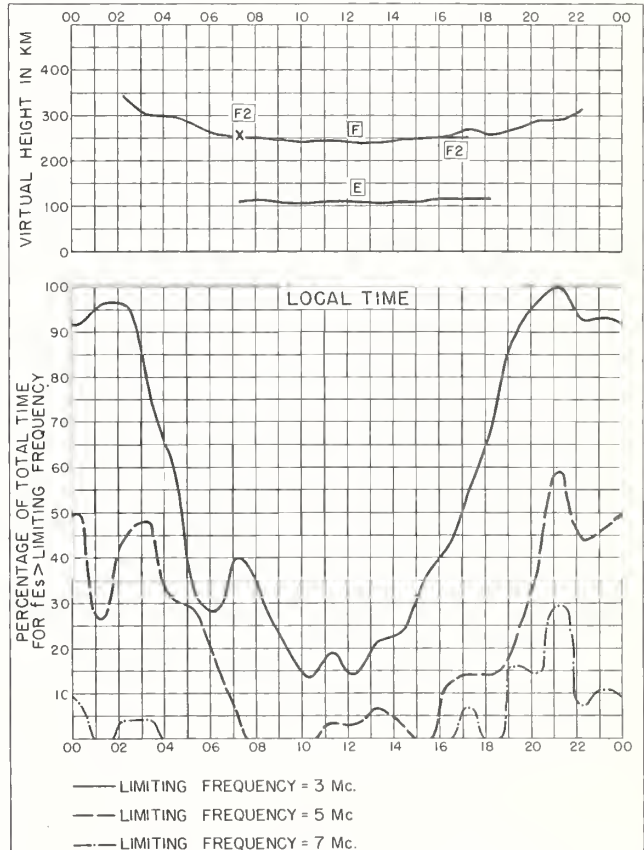


Fig. 4. TROMSØ, NORWAY SEPTEMBER 1960

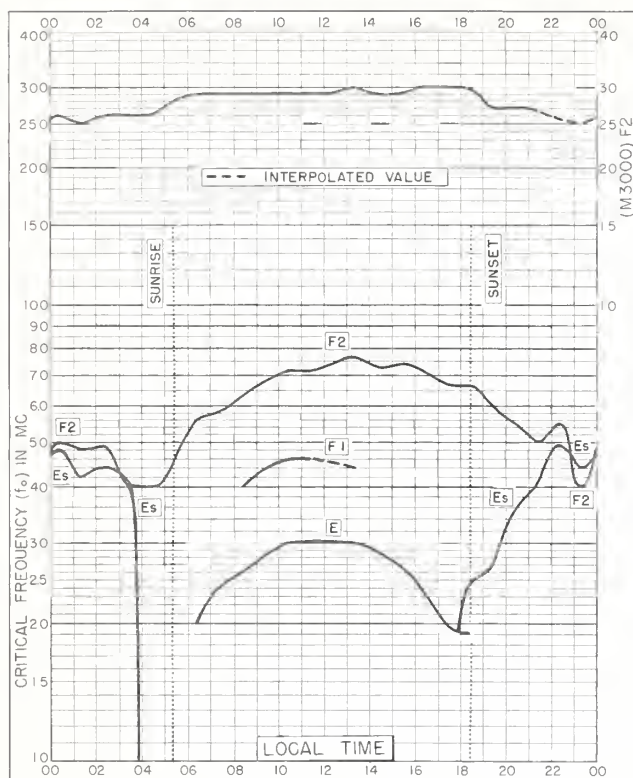


Fig. 5. KIRUNA, SWEDEN
67.8°N, 20.3°E SEPTEMBER 1960

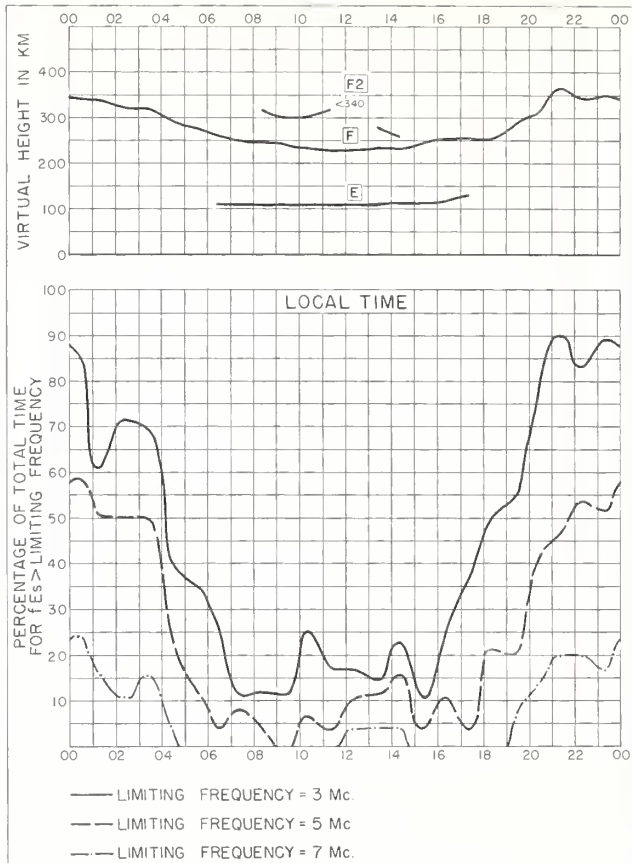


Fig. 6. KIRUNA, SWEDEN SEPTEMBER 1960

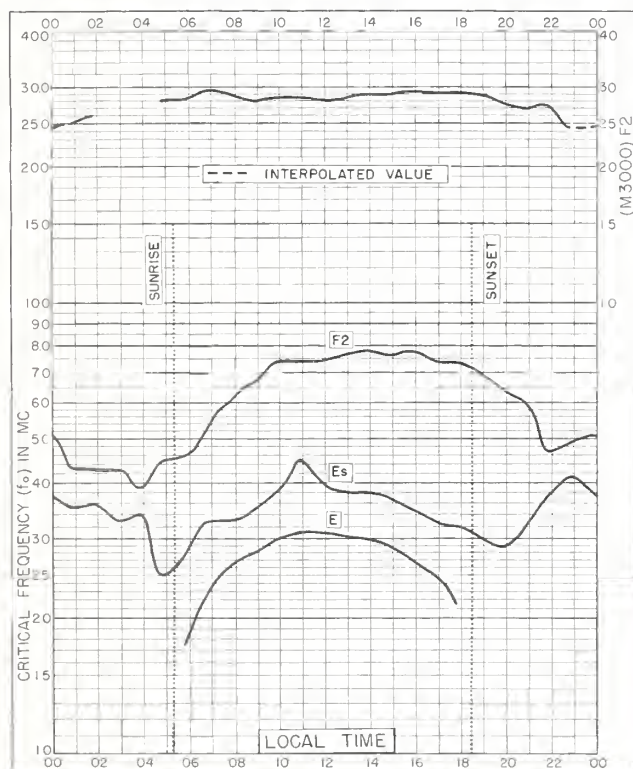


Fig. 7. SODANKYLA, FINLAND
67.4°N, 26.6°E SEPTEMBER 1960

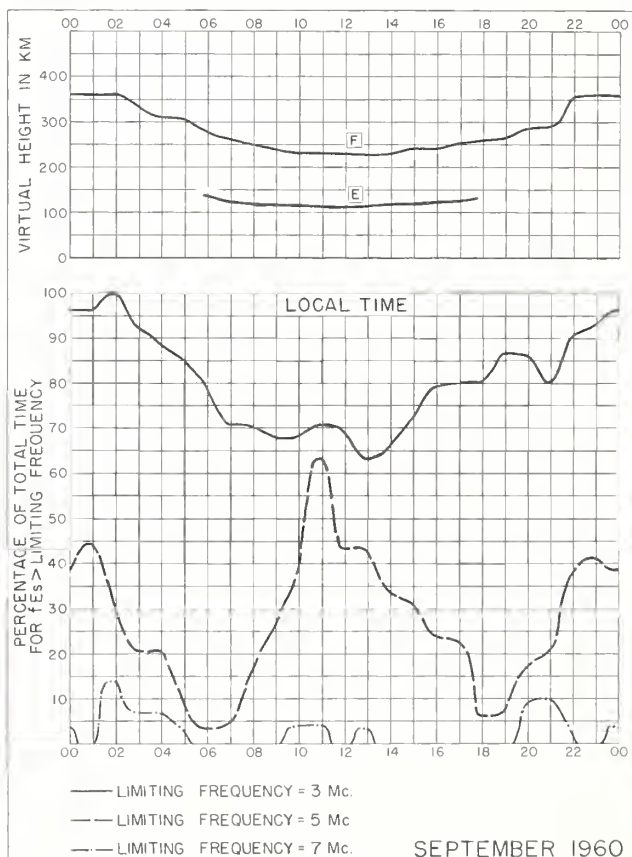


Fig. 8. SODANKYLA, FINLAND

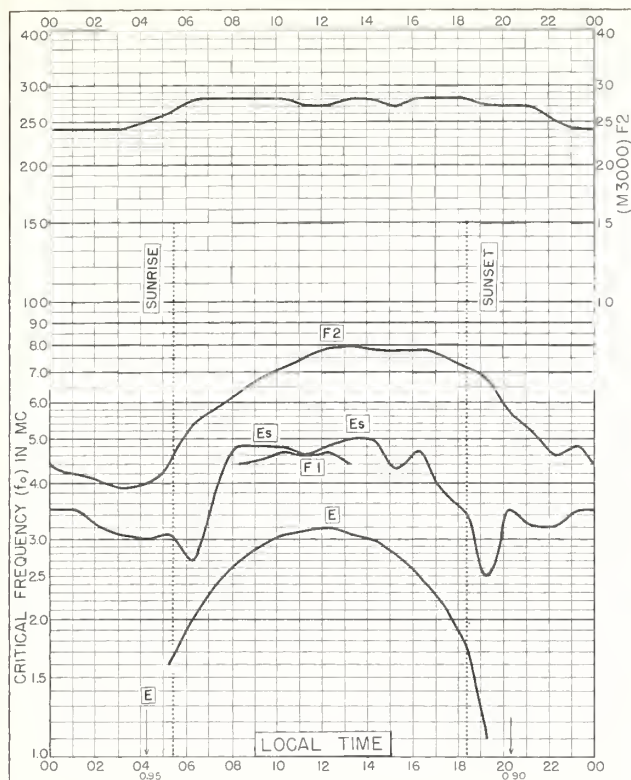


Fig. 9. LYCKSELE, SWEDEN
64.6°N, 18.8°E SEPTEMBER 1960

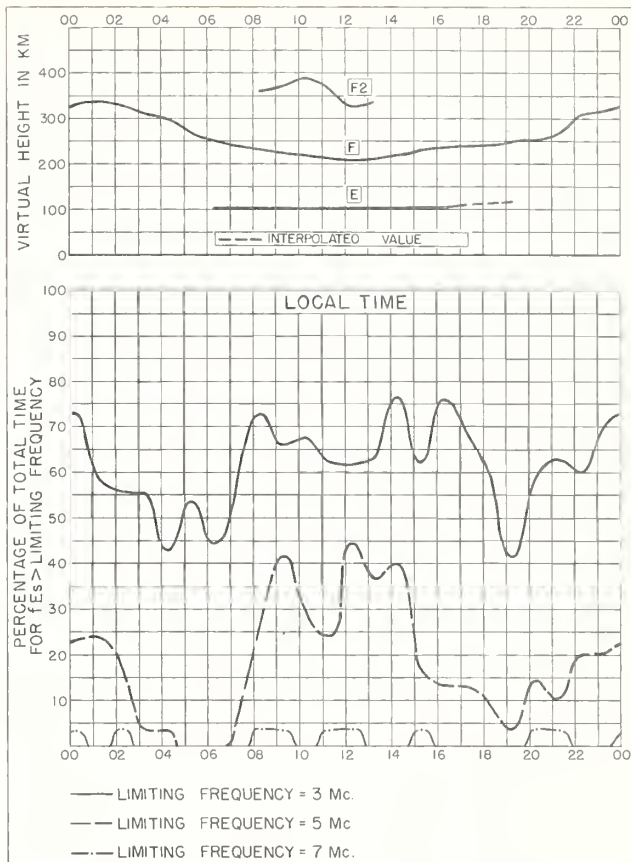


Fig. 10. LYCKSELE, SWEDEN SEPTEMBER 1960

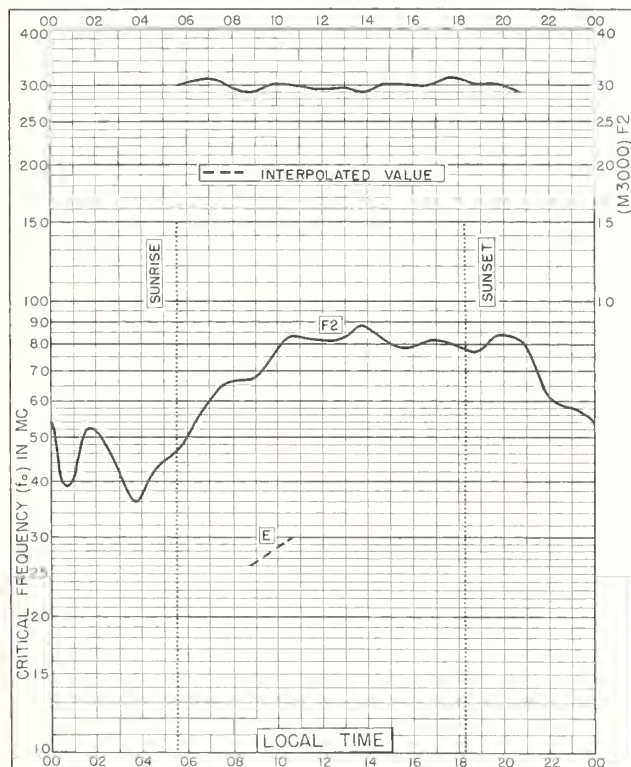


Fig. 11. NURMIJARVI, FINLAND
60.5°N, 24.6°E SEPTEMBER 1960

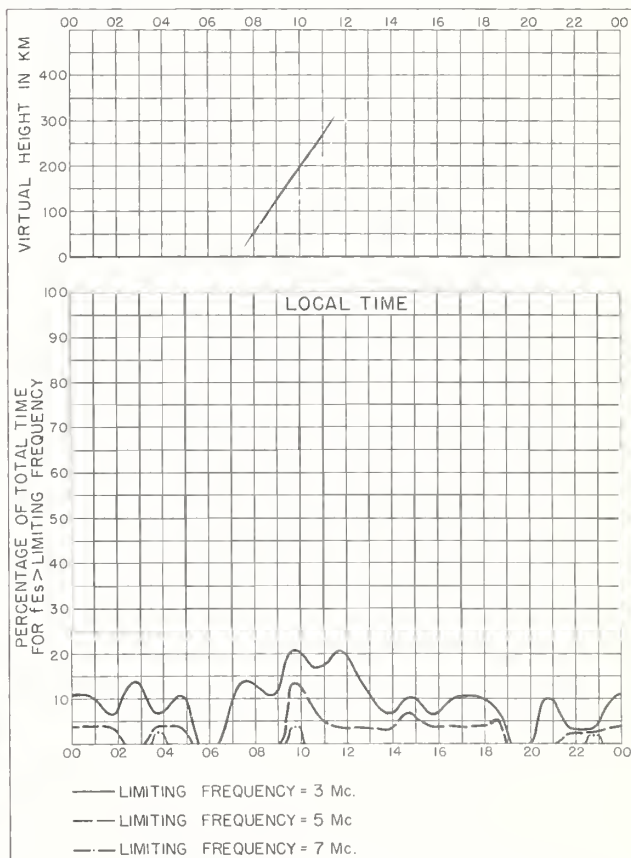


Fig. 12. NURMIJARVI, FINLAND SEPTEMBER 1960

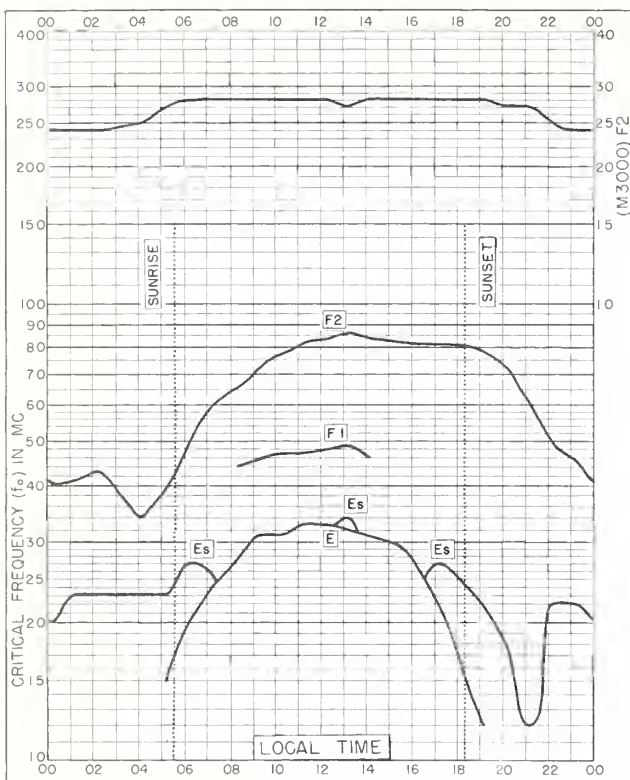


Fig. 13. UPSALA, SWEDEN
59.8°N, 17.6°E SEPTEMBER 1960

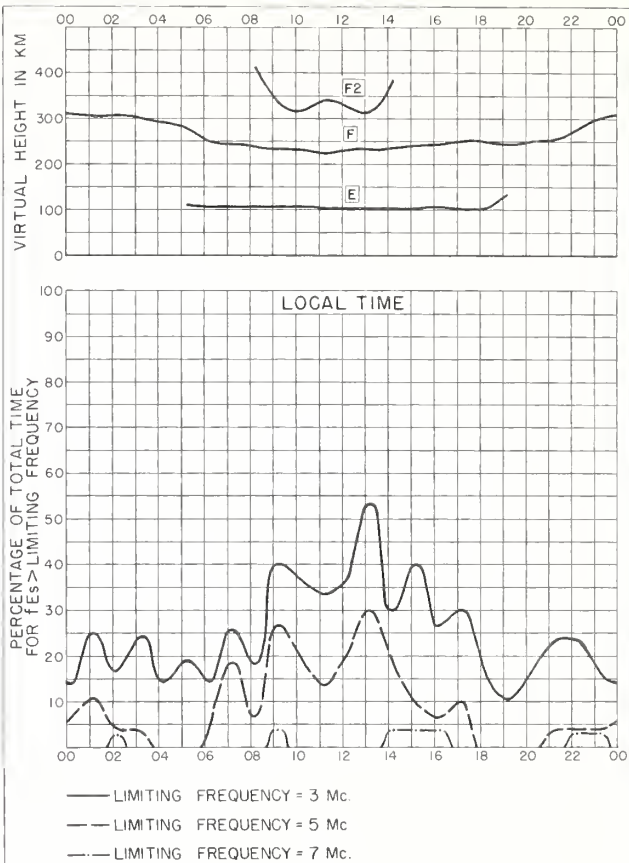


Fig. 14. UPSALA, SWEDEN SEPTEMBER 1960

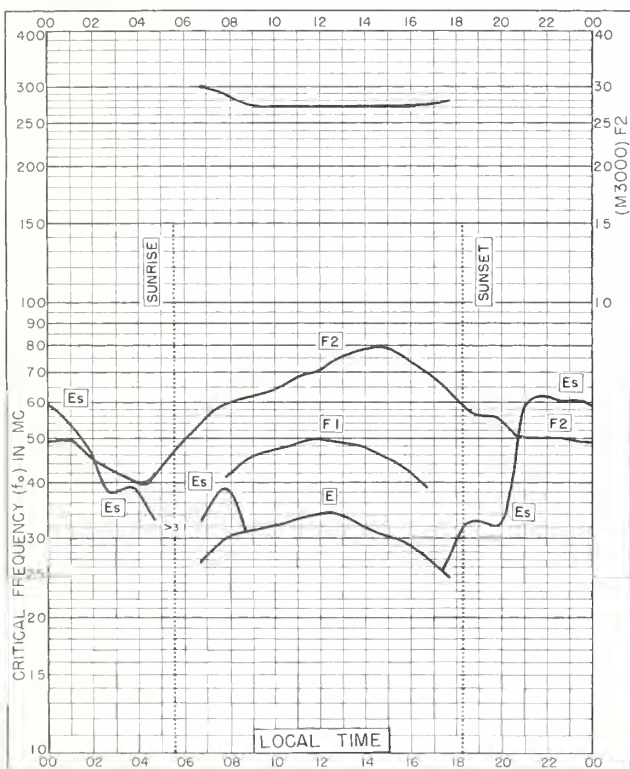


Fig. 15. CHURCHILL, CANADA
58.8°N, 94.2°W SEPTEMBER 1960

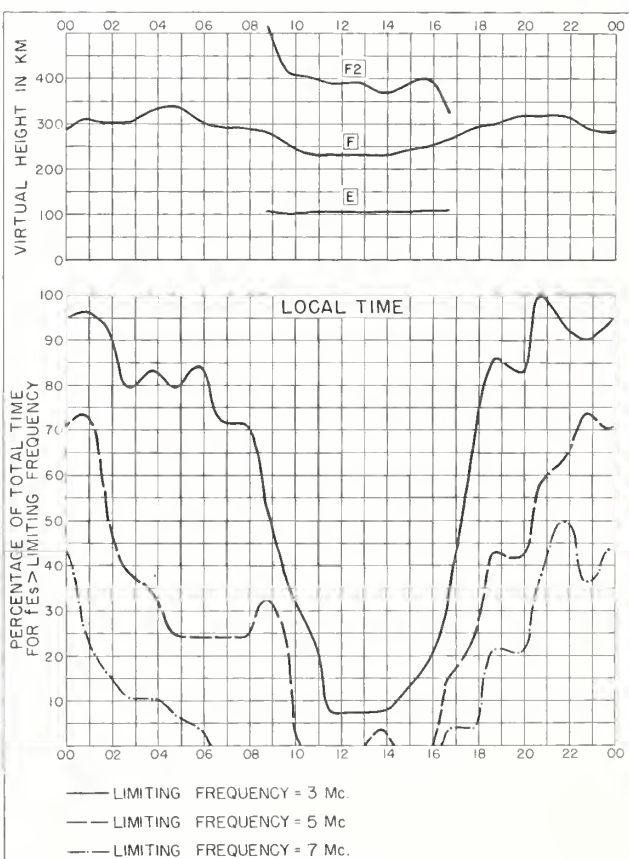


Fig. 16. CHURCHILL, CANADA SEPTEMBER 1960

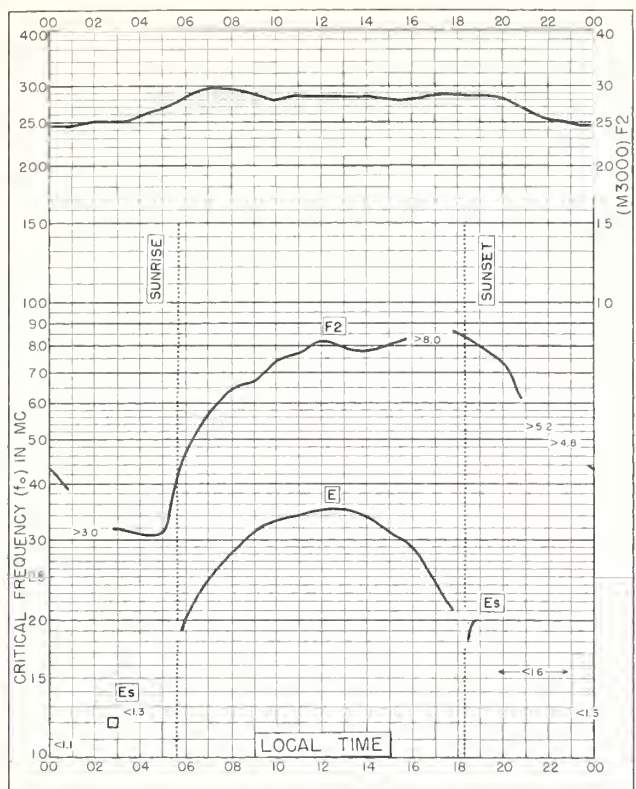


Fig. 17. INVERNESS, SCOTLAND
57.4°N, 4.2°W
SEPTEMBER 1960

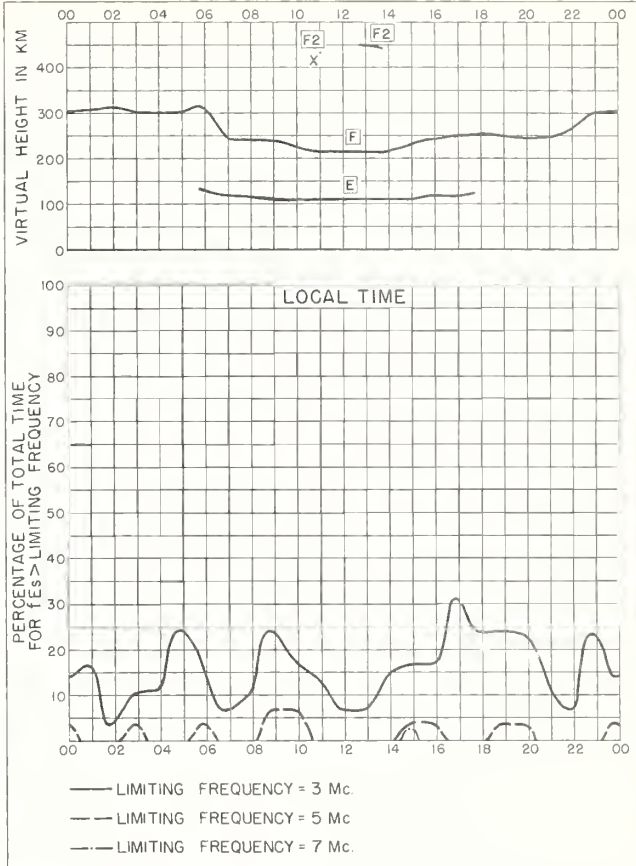


Fig. 18. INVERNESS, SCOTLAND SEPTEMBER 1960

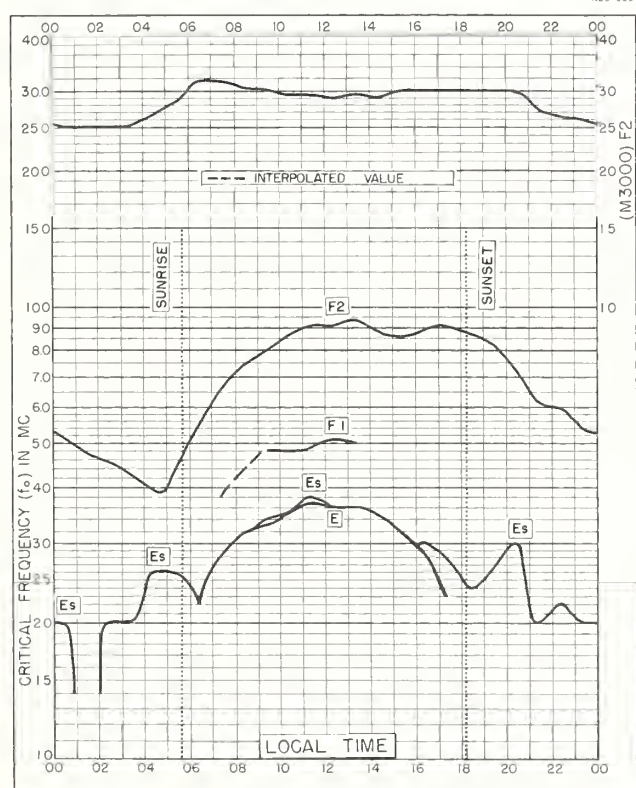


Fig. 19. De BILT, HOLLAND
52.1°N, 5.2°E
SEPTEMBER 1960

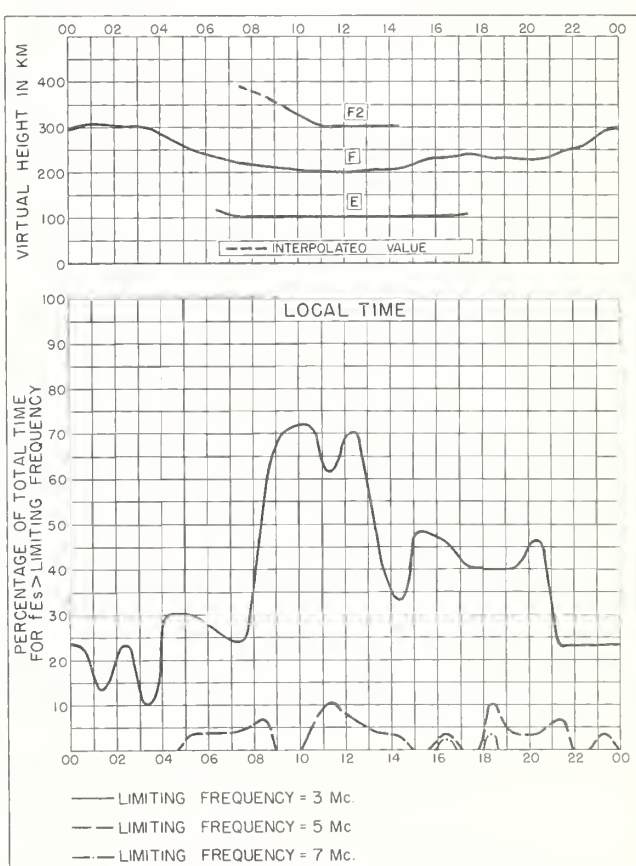
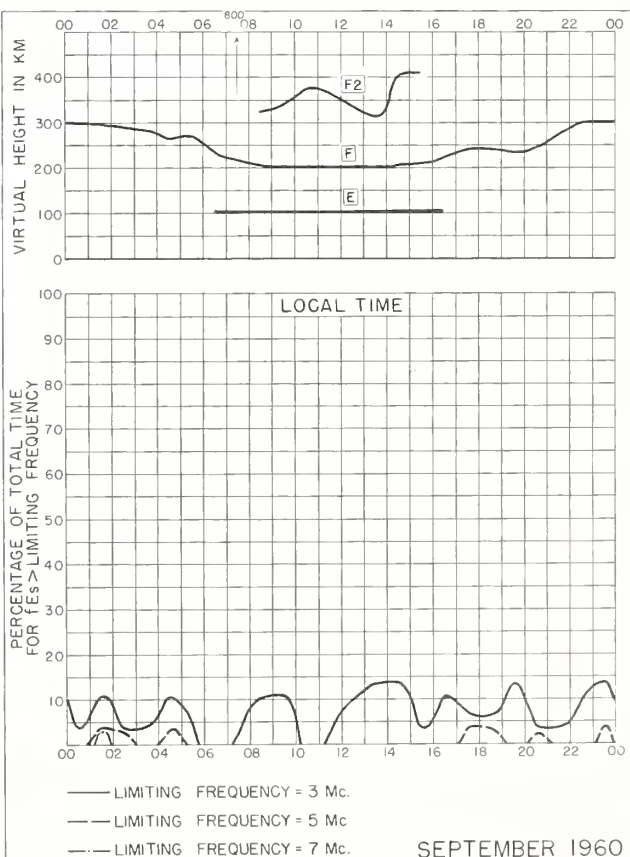
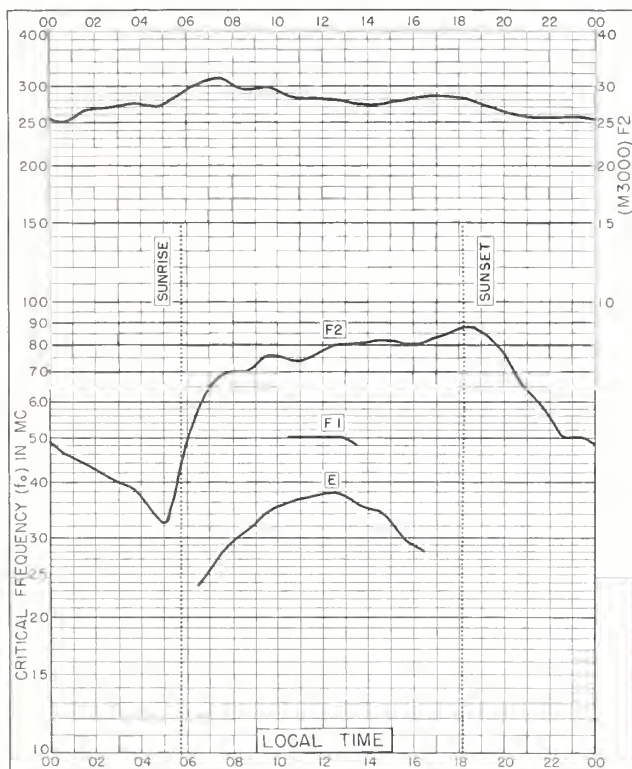
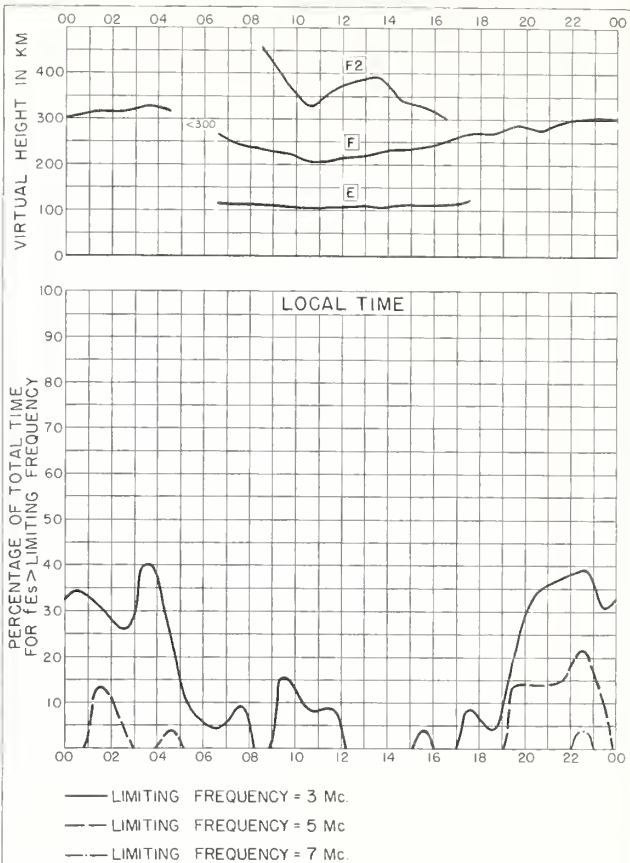
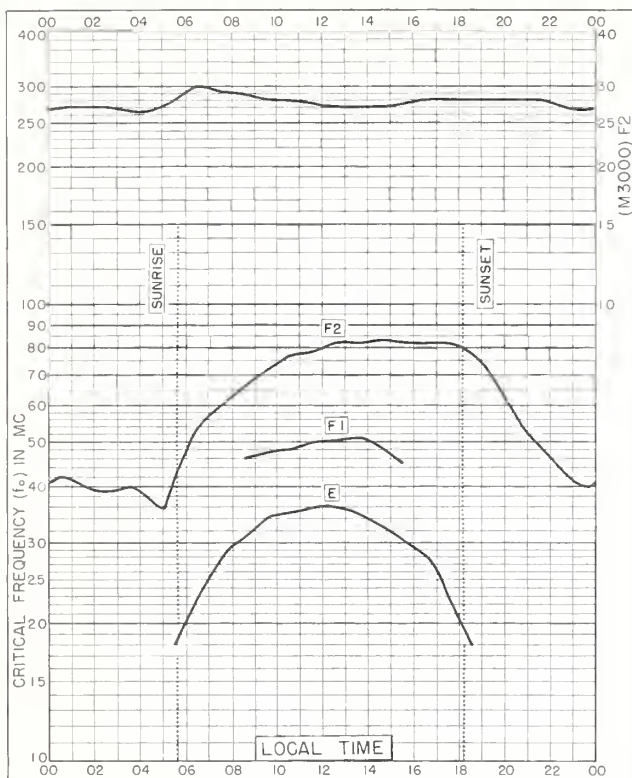


Fig. 20. De BILT, HOLLAND SEPTEMBER 1960



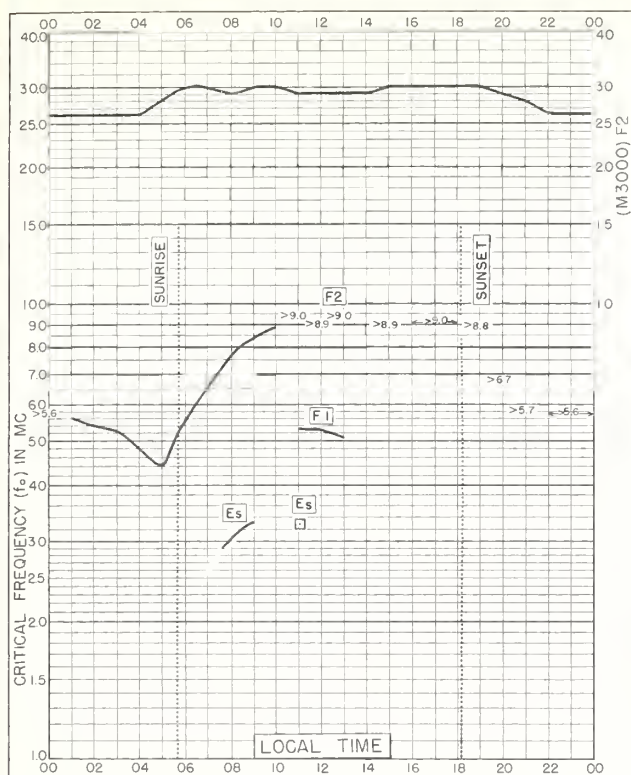
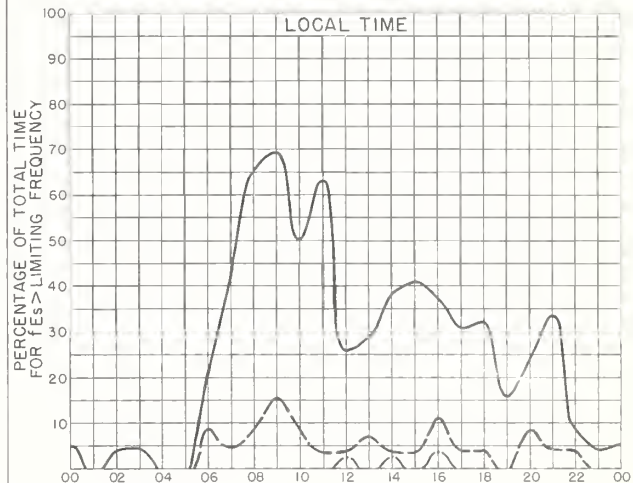
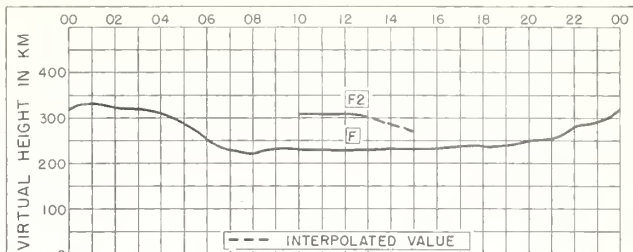


Fig. 25. GRAZ, AUSTRIA
47.1°N, 15.5°E

SEPTEMBER 1960



— LIMITING FREQUENCY = 3 Mc.
— LIMITING FREQUENCY = 5 Mc
— LIMITING FREQUENCY = 7 Mc.

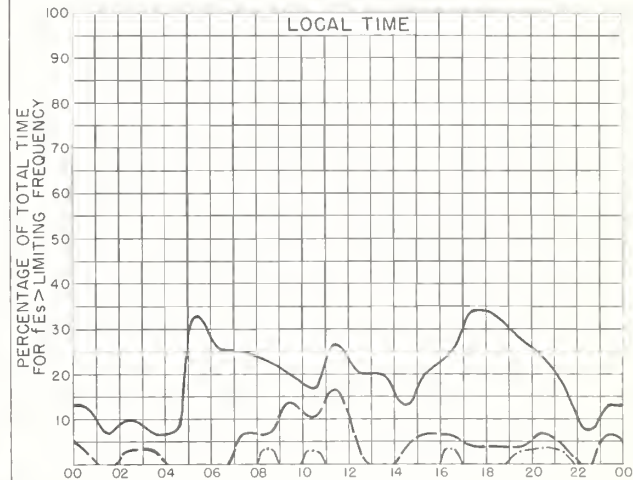
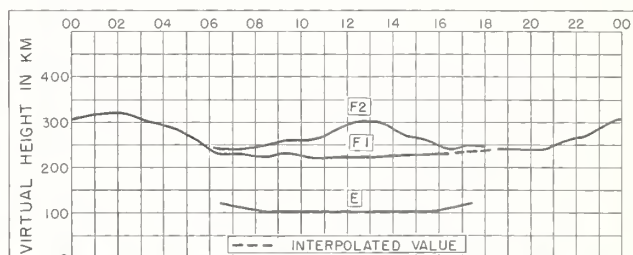
Fig. 26. GRAZ, AUSTRIA

SEPTEMBER 1960



Fig. 27. SOTTENS, SWITZERLAND
46.6°N, 6.7°E

SEPTEMBER 1960



— LIMITING FREQUENCY = 3 Mc.
— LIMITING FREQUENCY = 5 Mc
— LIMITING FREQUENCY = 7 Mc.

Fig. 28. SOTTENS, SWITZERLAND

SEPTEMBER 1960

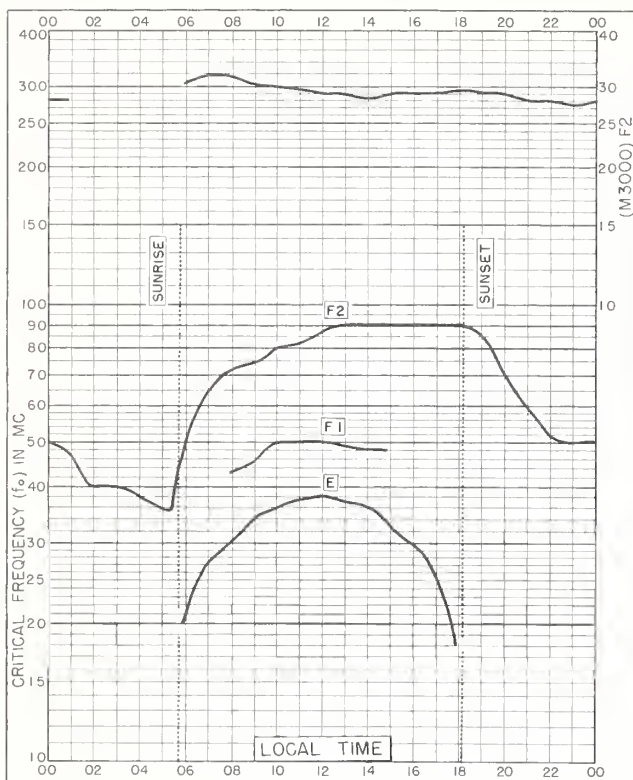


Fig. 29. OTTAWA, CANADA
45.4°N, 75.9°W SEPTEMBER 1960

NBS 503

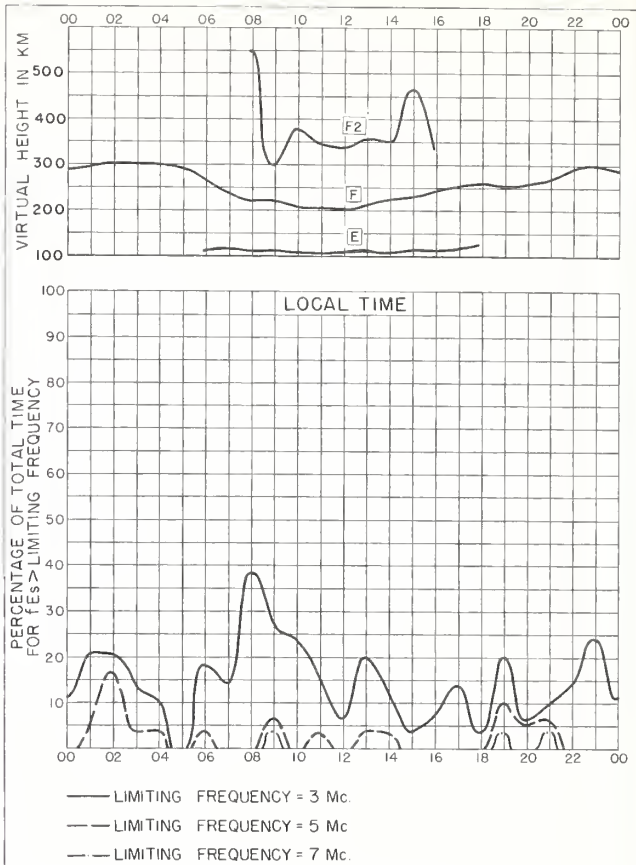


Fig. 30. OTTAWA, CANADA SEPTEMBER 1960

NBS 490

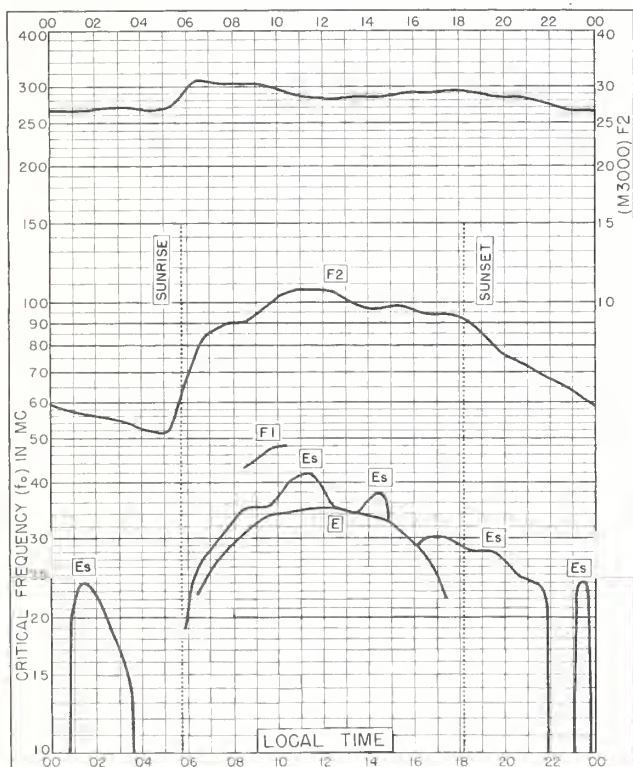


Fig. 31. WAKKANAI, JAPAN
45.4°N, 141.7°E SEPTEMBER 1960

NBS 503

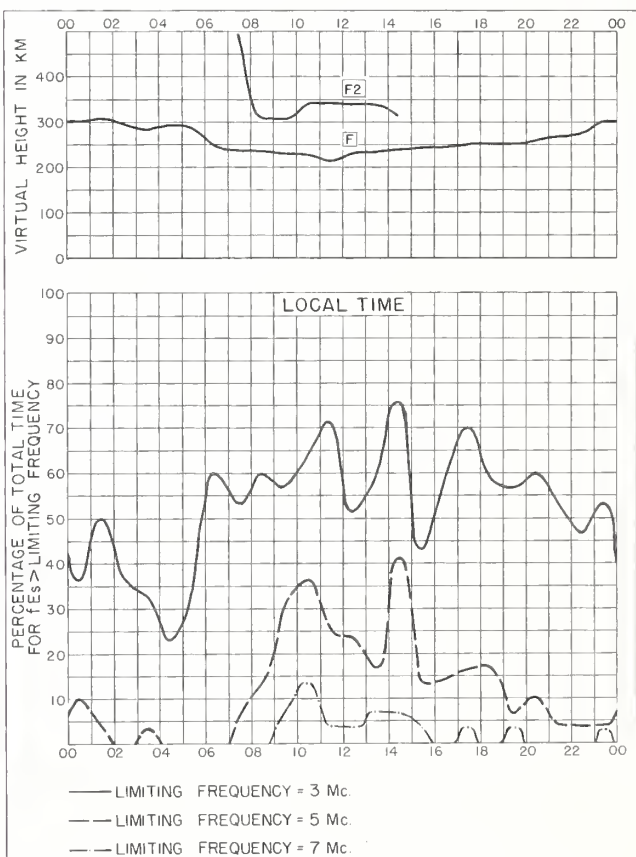


Fig. 32. WAKKANAI, JAPAN SEPTEMBER 1960

NBS 490

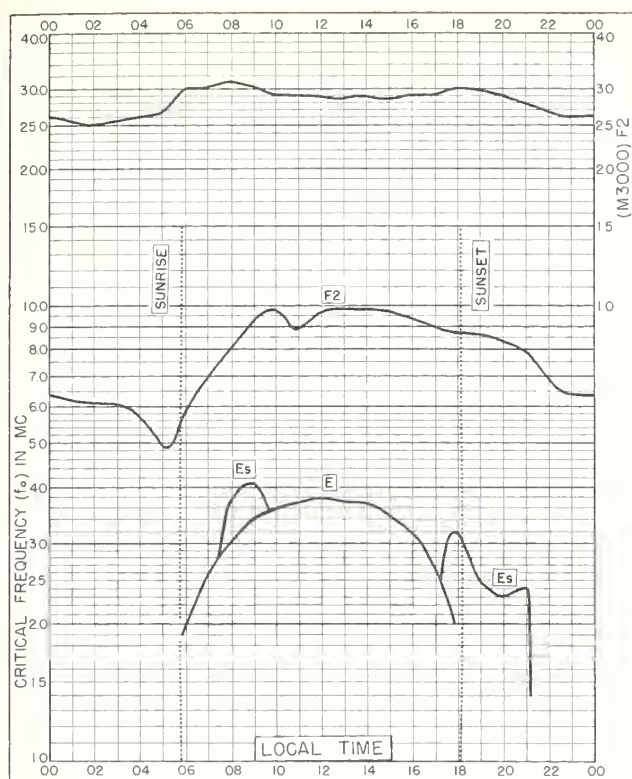


Fig. 33. ROME, ITALY
41.8°N, 12.5°E

SEPTEMBER 1960

NBS 503

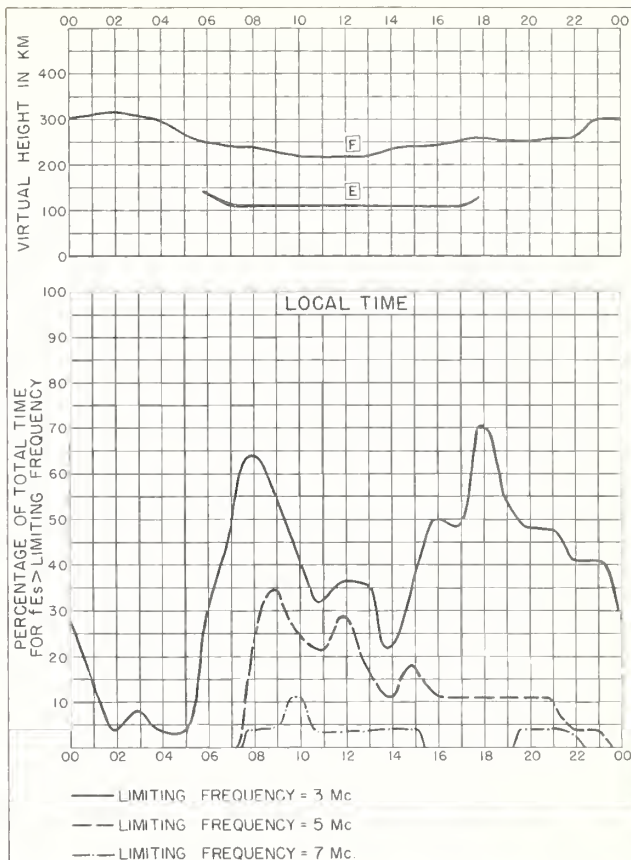


Fig. 34. ROME, ITALY

SEPTEMBER 1960

NBS 490

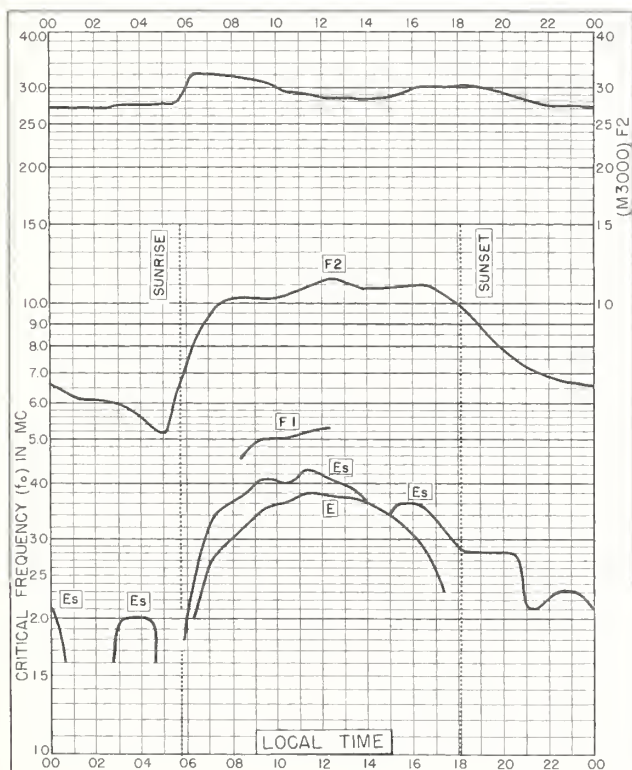


Fig. 35. AKITA, JAPAN
39.7°N, 140.1°E

SEPTEMBER 1960

NBS 503

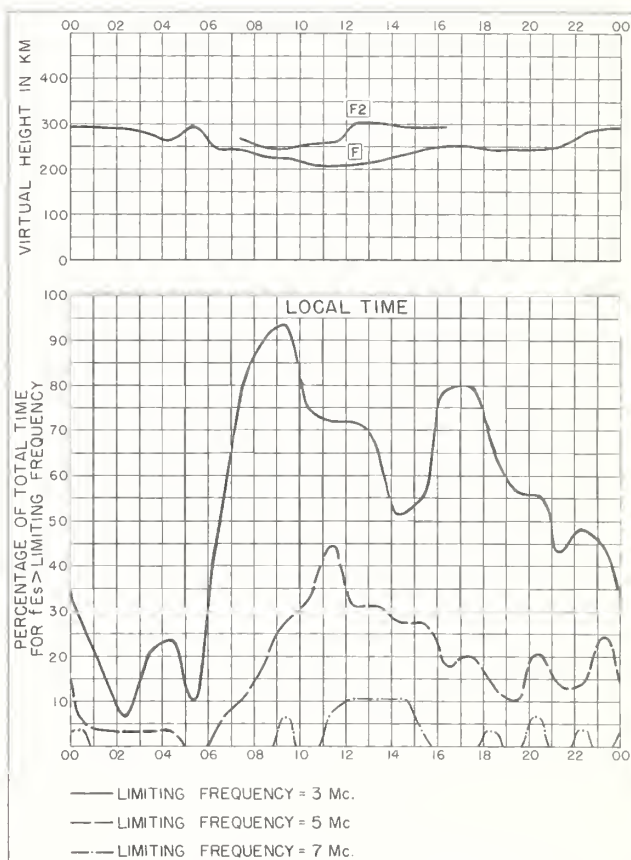
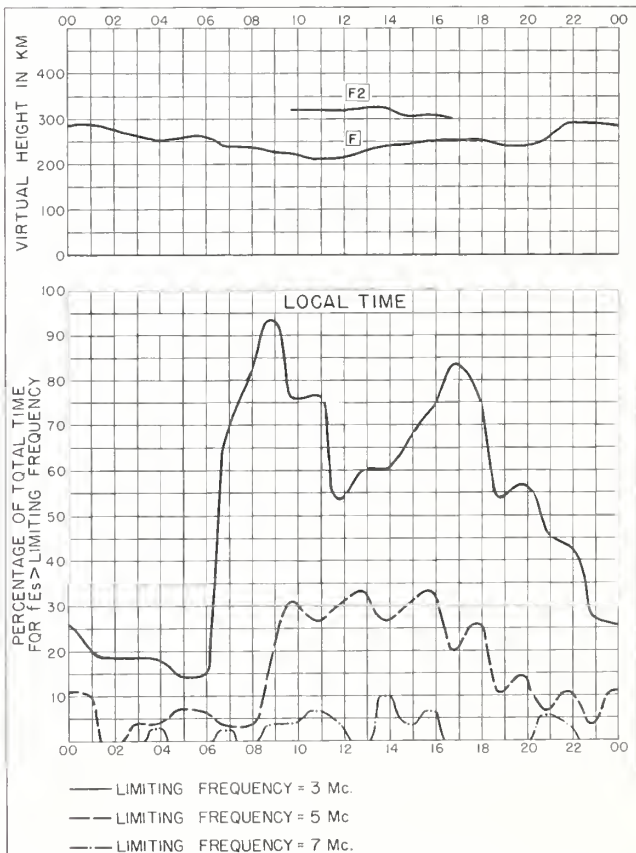
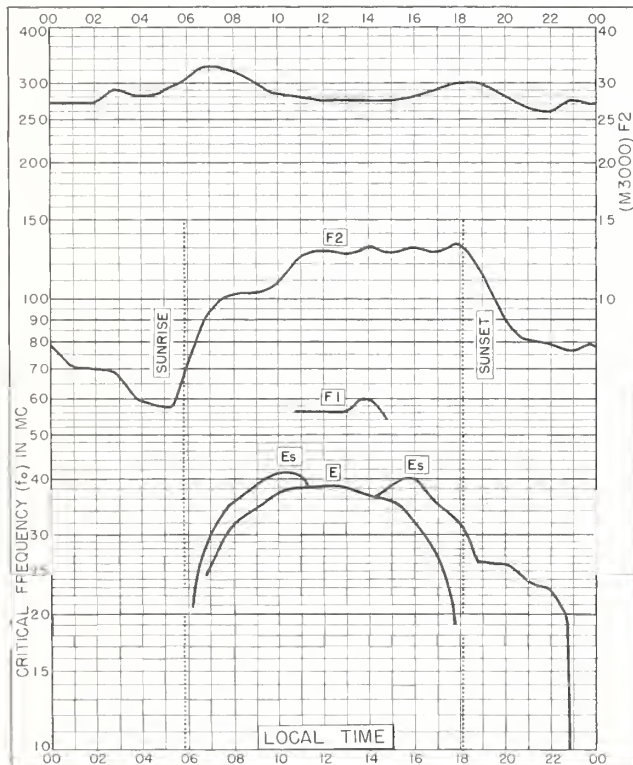
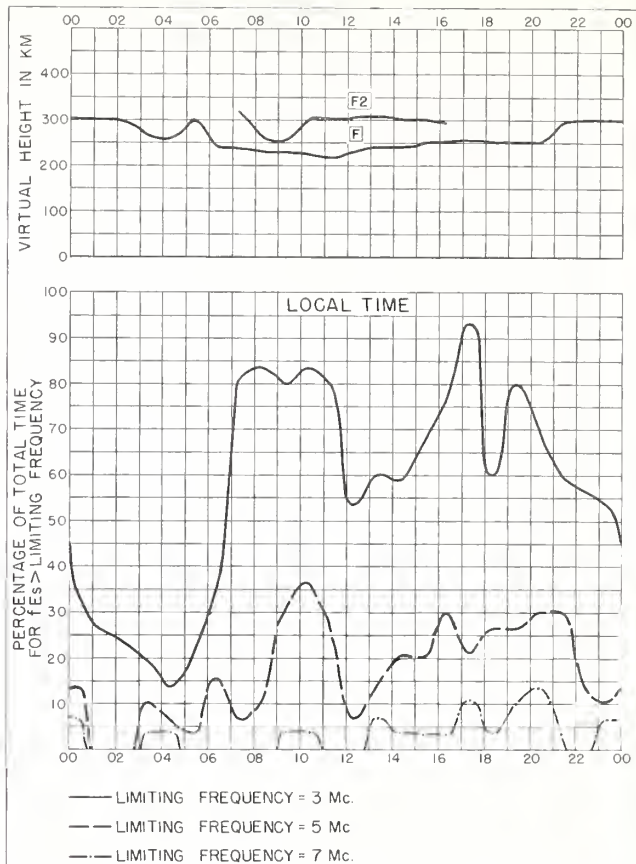
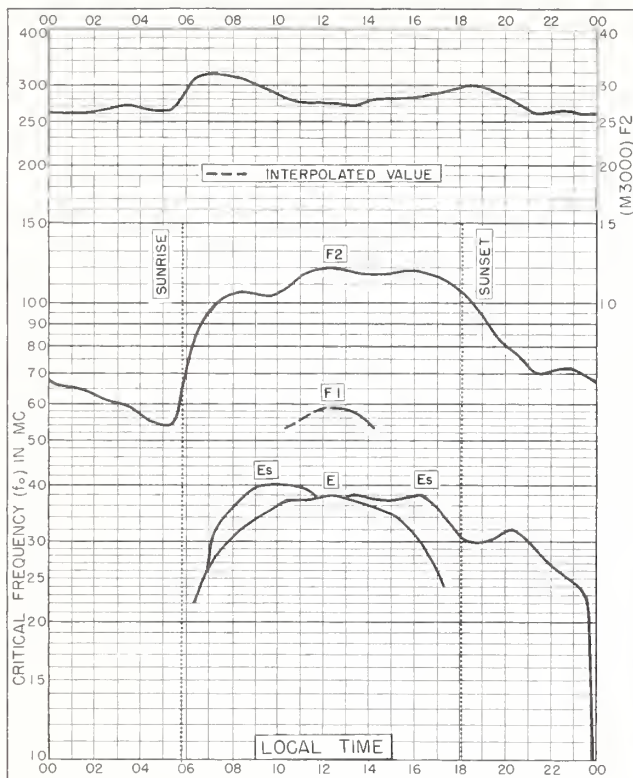


Fig. 36. AKITA, JAPAN

SEPTEMBER 1960

NBS 490



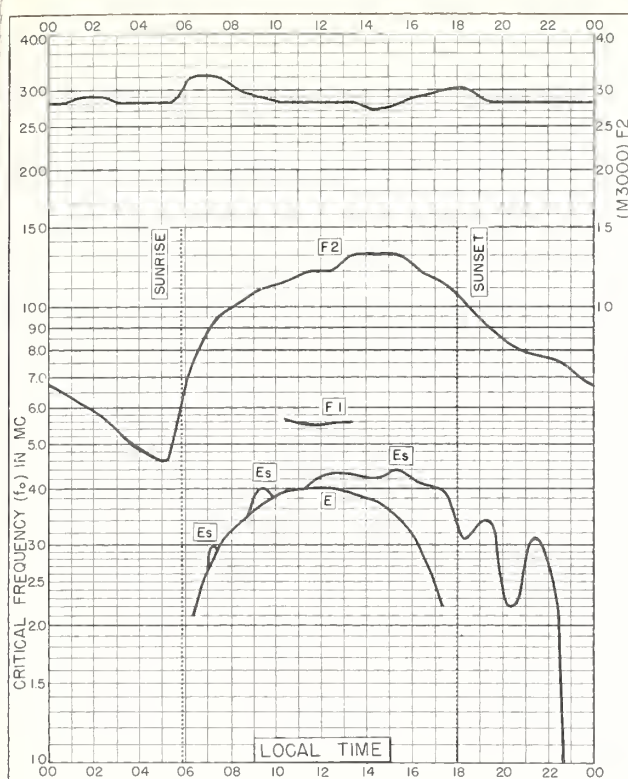


Fig. 41. EL CERILLO, MEXICO
19.3°N, 99.5°W SEPTEMBER 1960

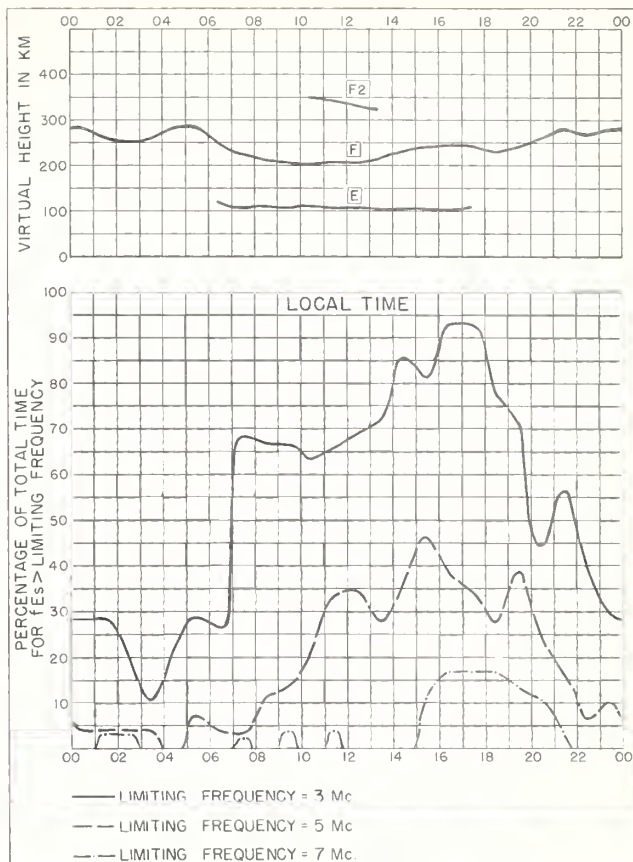


Fig. 42. EL CERILLO, MEXICO SEPTEMBER 1960

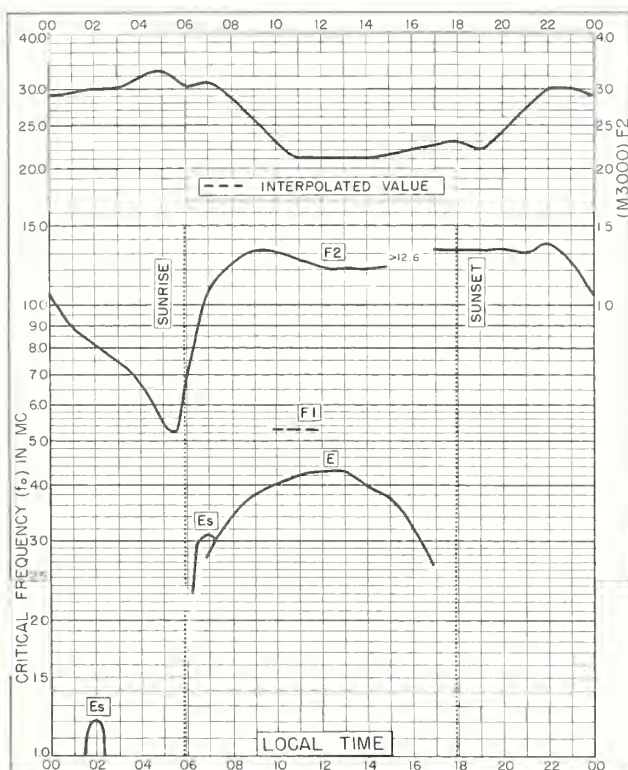


Fig. 43. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E SEPTEMBER 1960

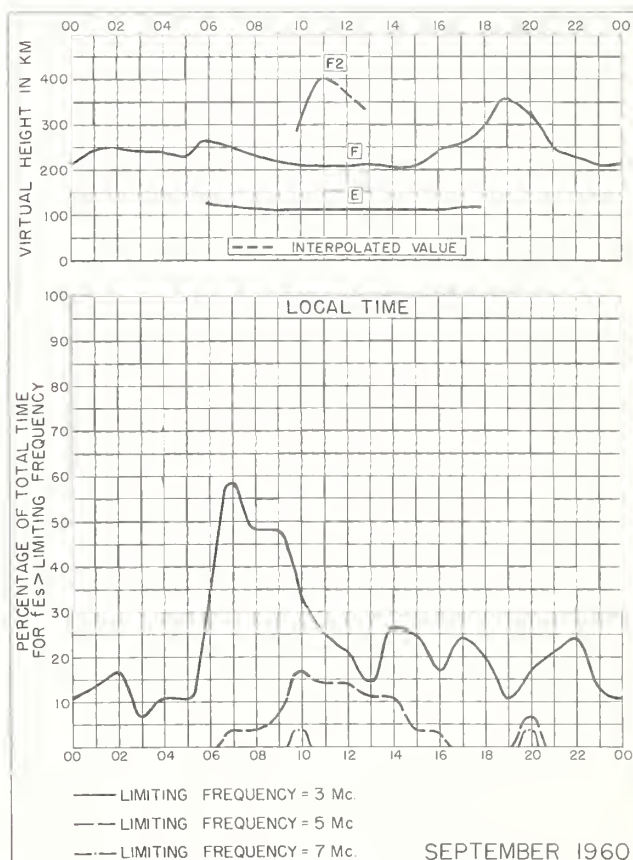


Fig. 44. SINGAPORE, BRITISH MALAYA

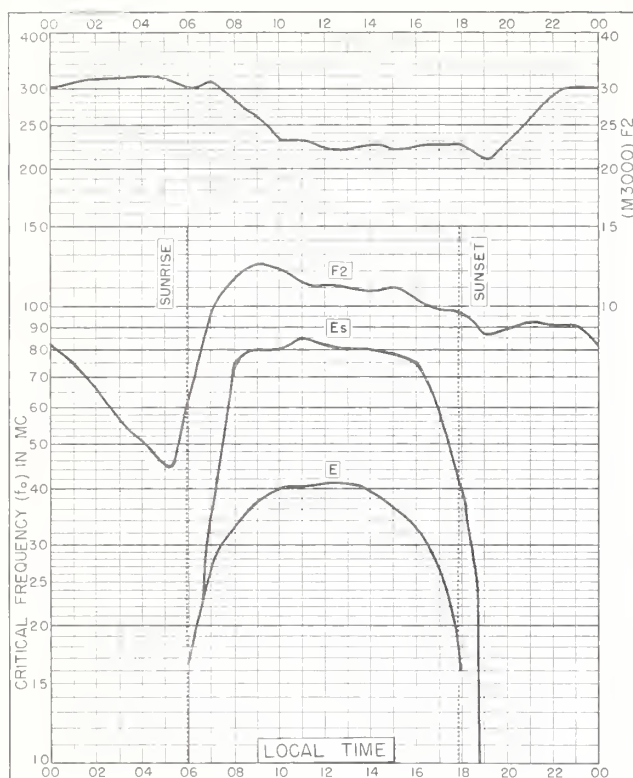


Fig. 45. HUANCAYO, PERU
12.0°S, 75.3°W SEPTEMBER 1960

NBS 503

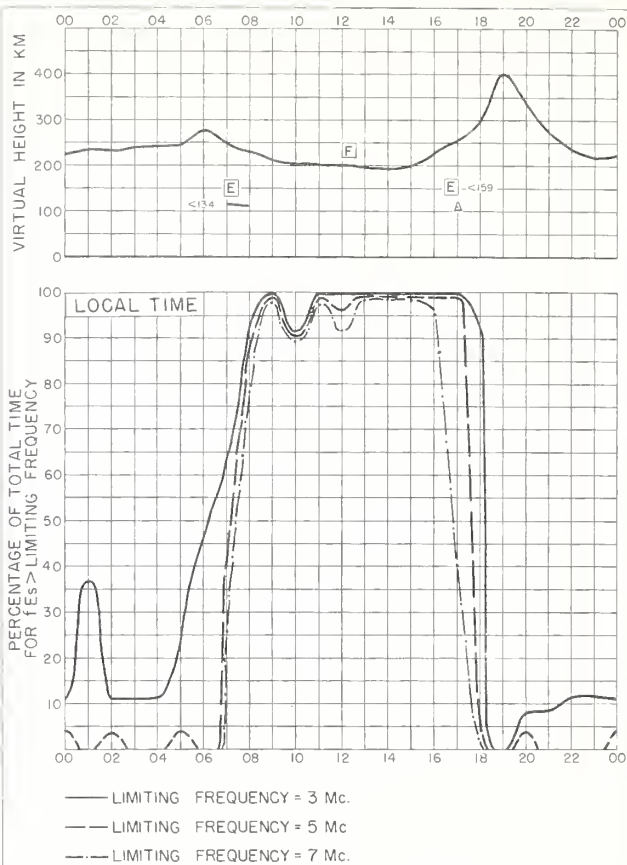


Fig. 46. HUANCAYO, PERU SEPTEMBER 1960

NBS 490

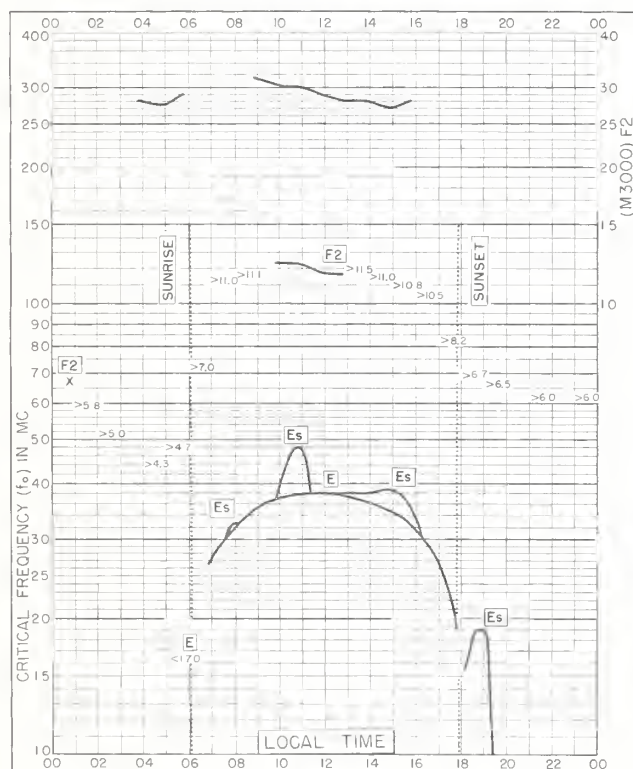


Fig. 47. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E SEPTEMBER 1960

NBS 503

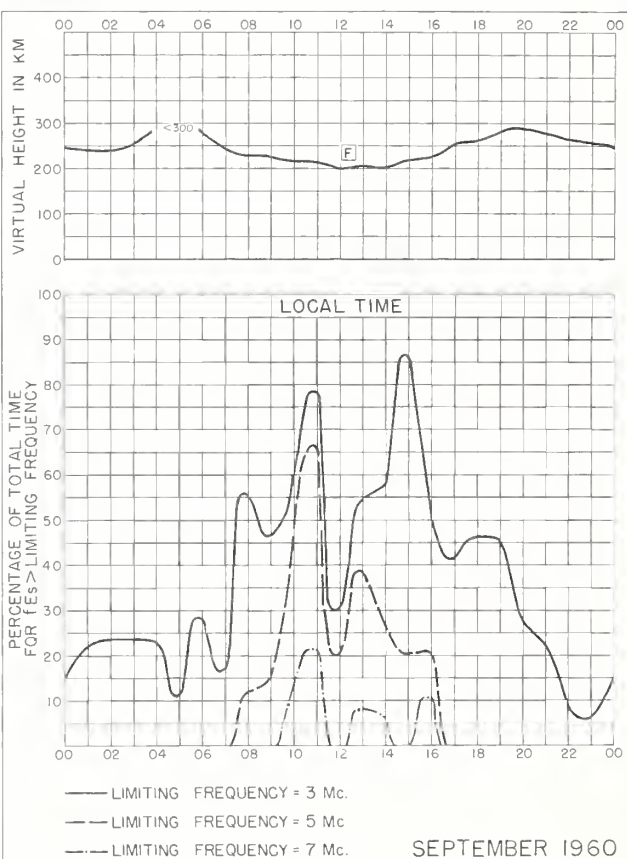


Fig. 48. TOWNSVILLE, AUSTRALIA SEPTEMBER 1960

NBS 490

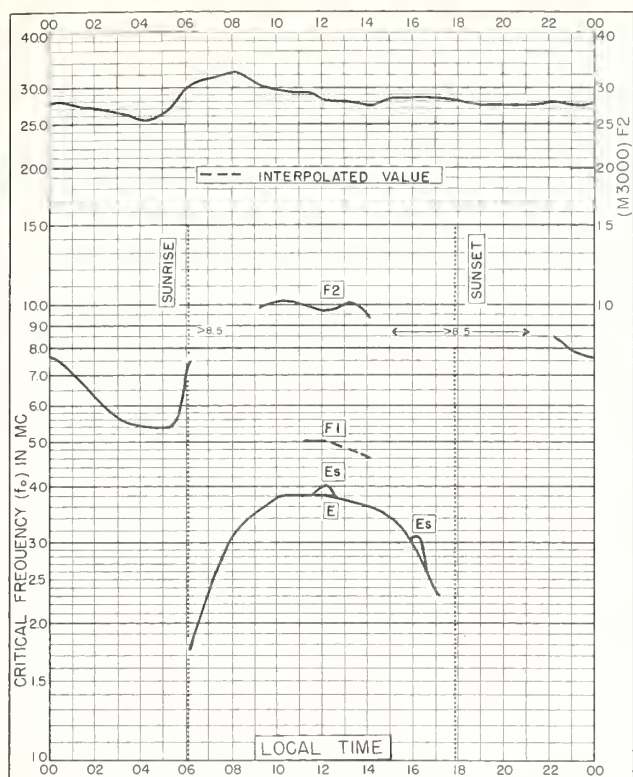


Fig. 49. BRISBANE, AUSTRALIA
27.5°S, 152.9°E SEPTEMBER 1960

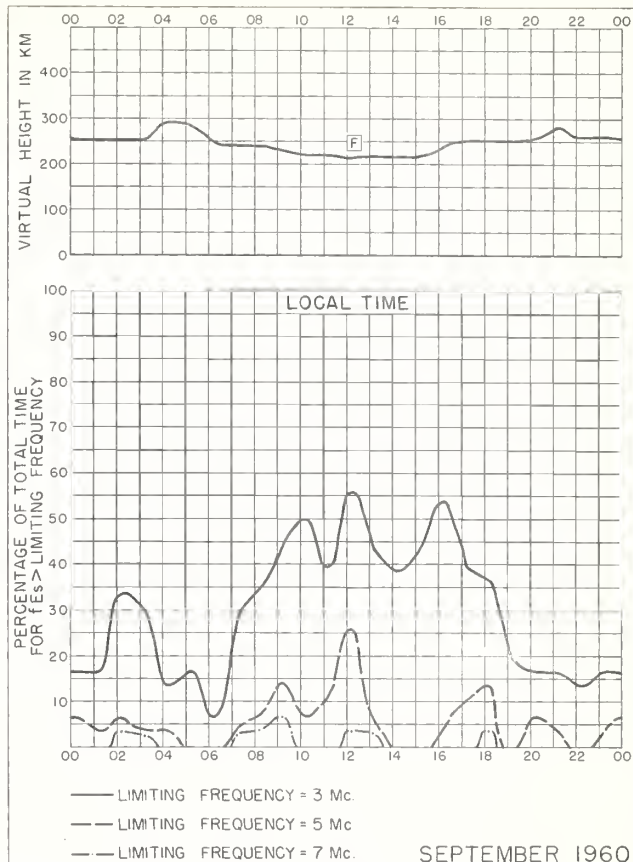


Fig. 50. BRISBANE, AUSTRALIA

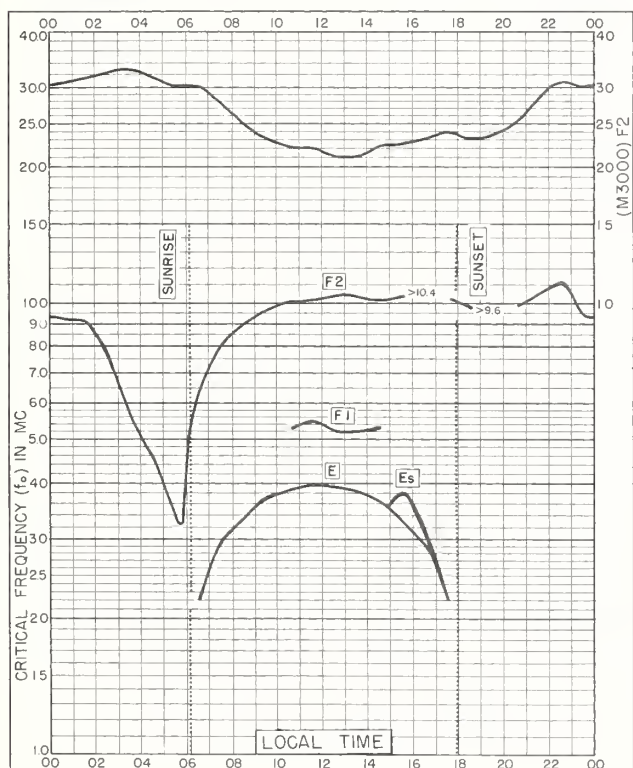


Fig. 51. TALARA, PERU
4.6°S, 81.3°W AUGUST 1960

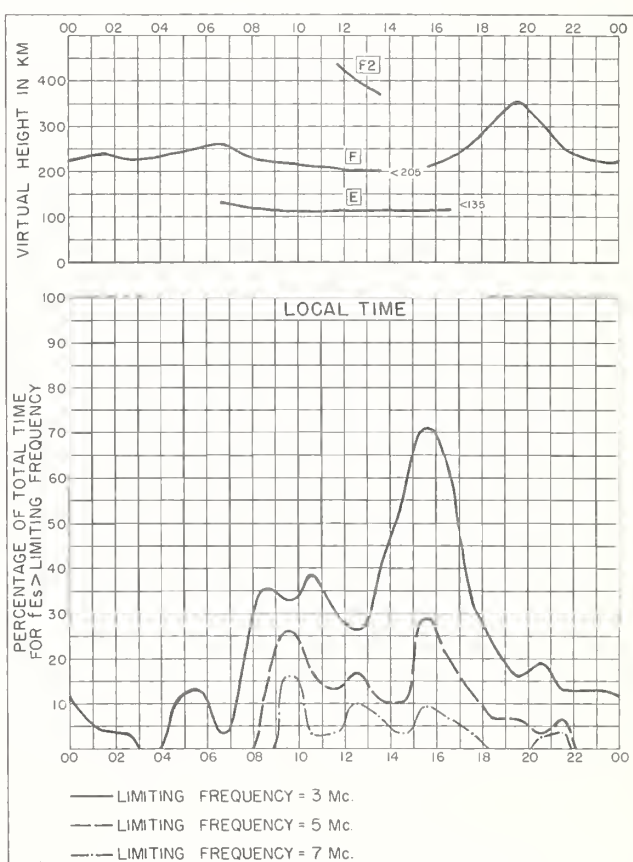


Fig. 52. TALARA, PERU

AUGUST 1960

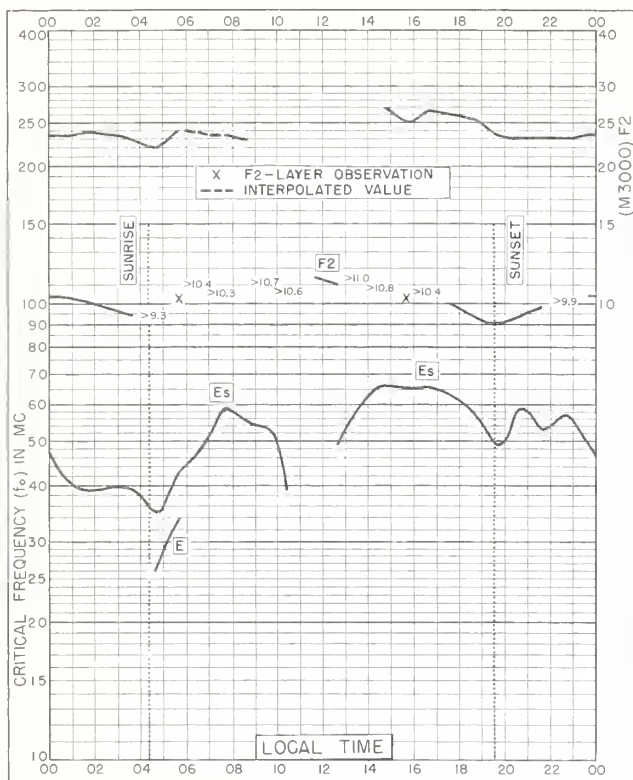


Fig. 53. TRELEW, ARGENTINA
43.2°S, 65.3°W DECEMBER 1959

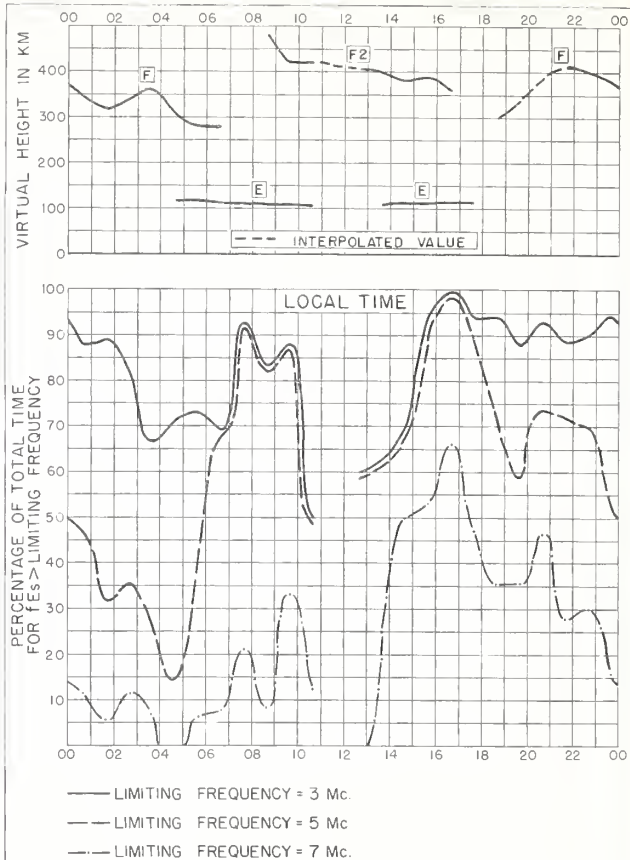


Fig. 54. TRELEW, ARGENTINA DECEMBER 1959

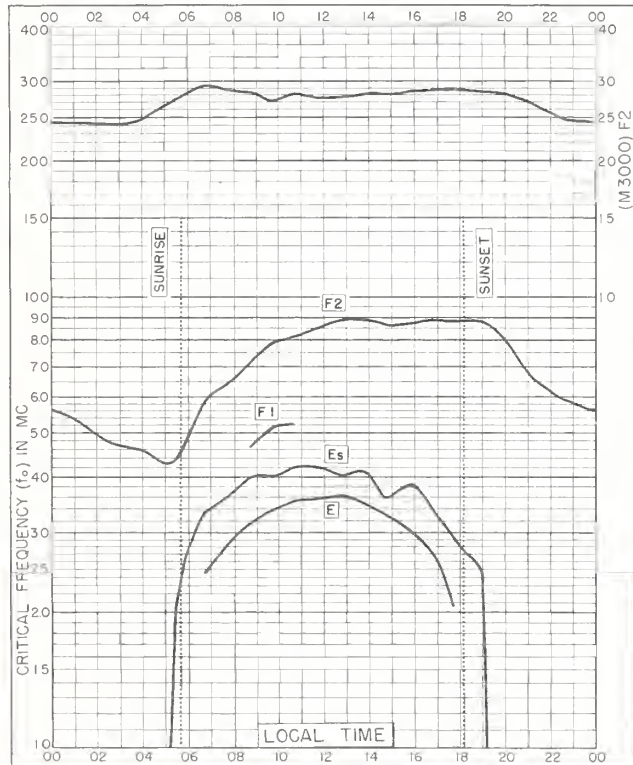


Fig. 55. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E SEPTEMBER 1959

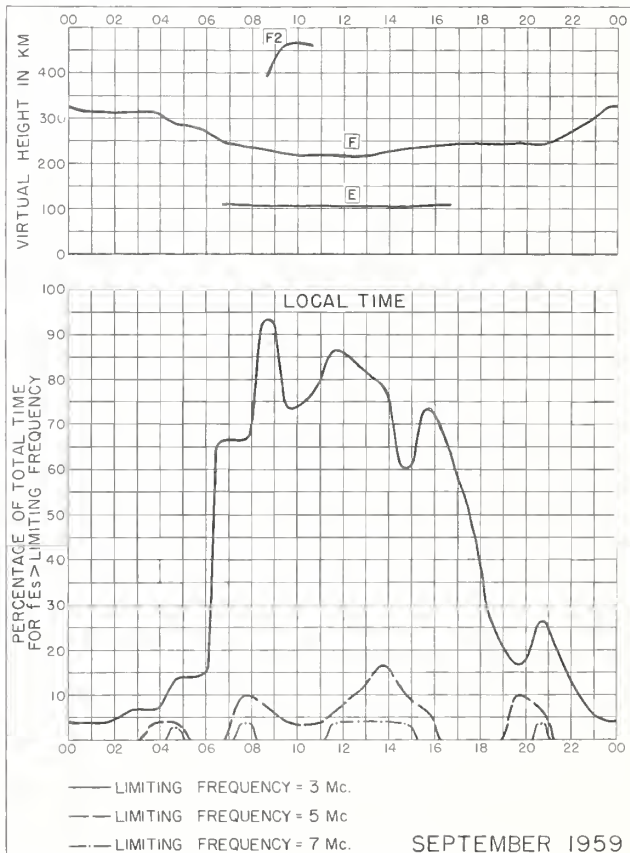


Fig. 56. LINDAU/HARZ, GERMANY SEPTEMBER 1959

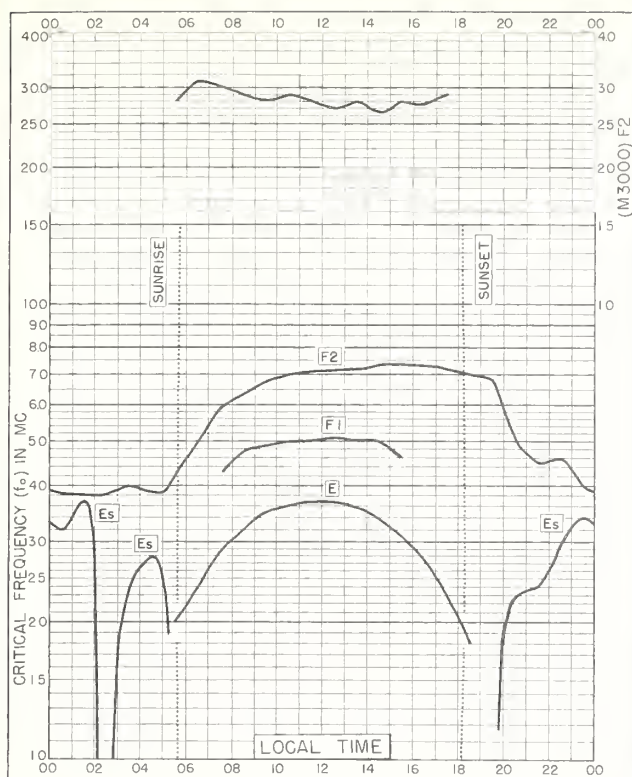


Fig. 57. WINNIPEG, CANADA
49.9°N, 97.4°W SEPTEMBER 1959

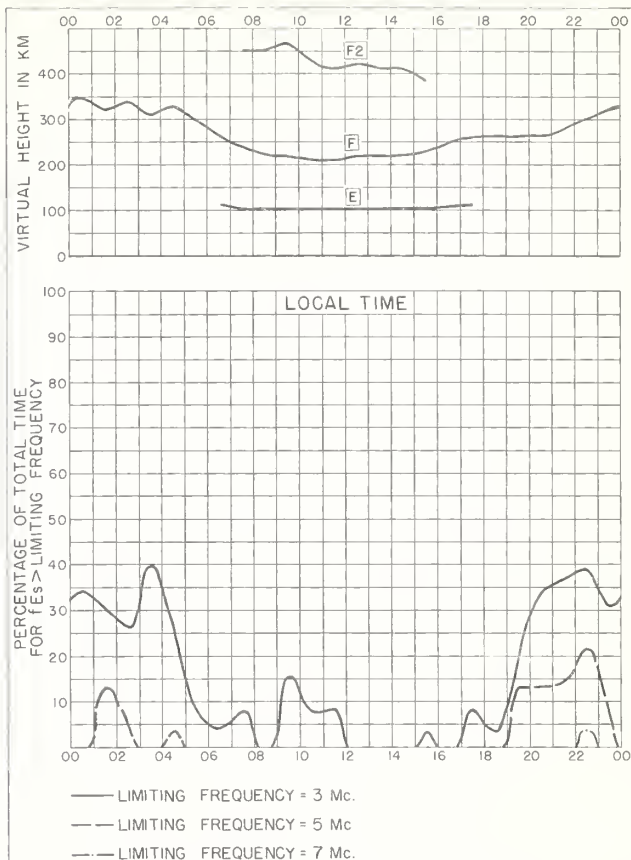


Fig. 58. WINNIPEG, CANADA SEPTEMBER 1959

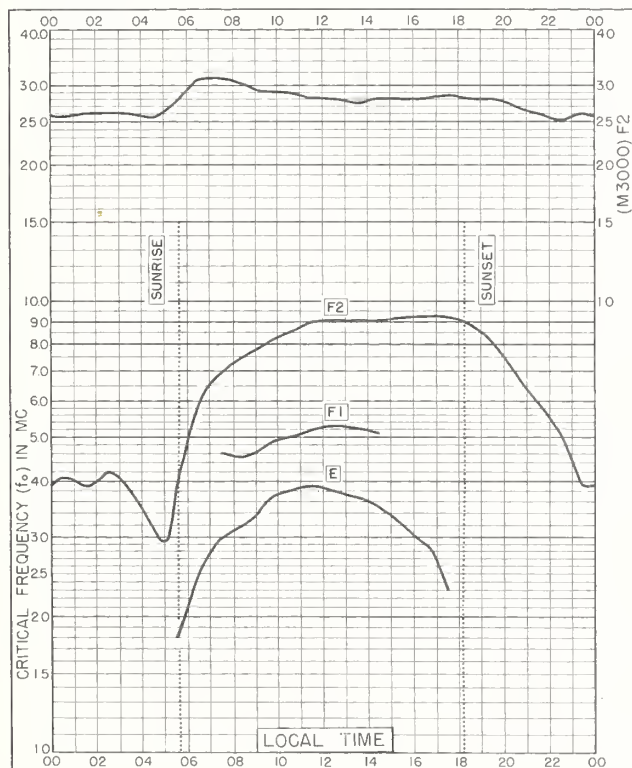


Fig. 59. ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W SEPTEMBER 1959

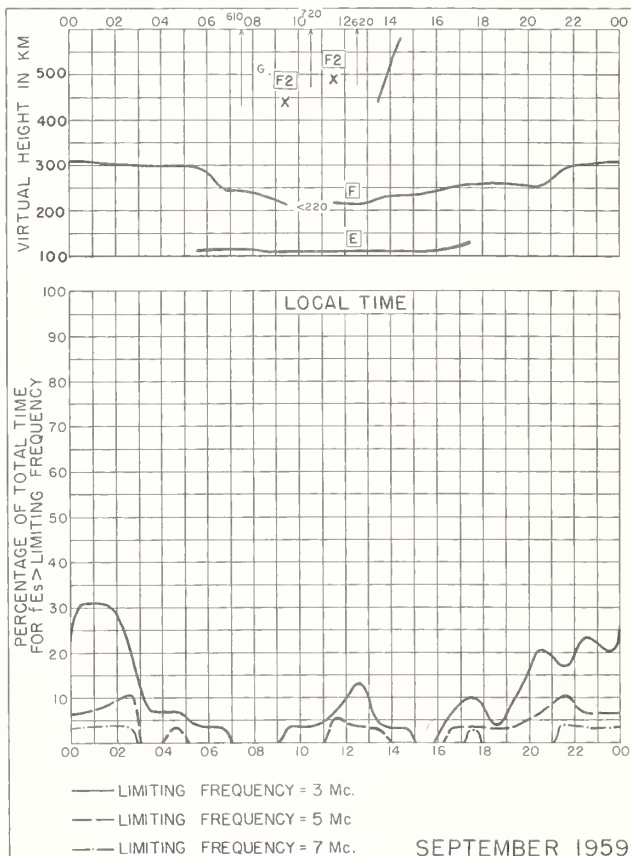


Fig. 60. ST. JOHN'S, NEWFOUNDLAND

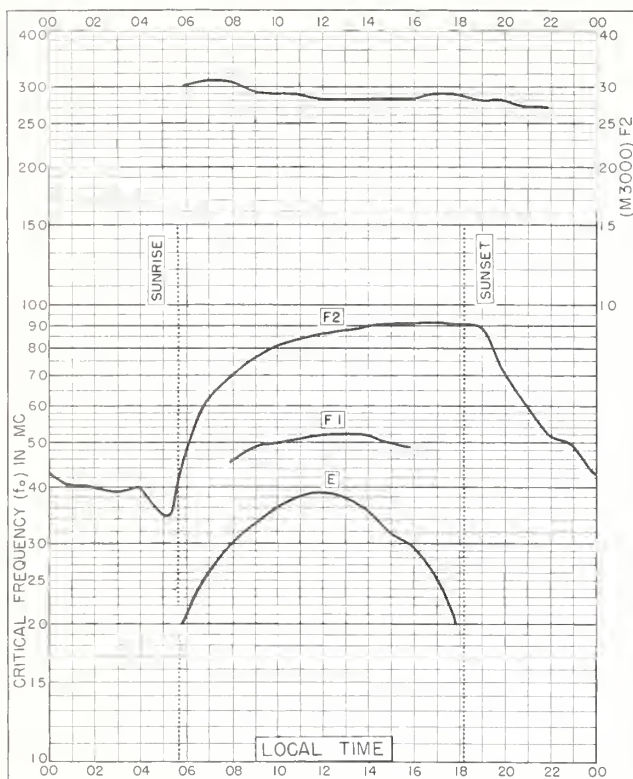


Fig. 61. OTTAWA, CANADA
45.4°N, 75.9°W

SEPTEMBER 1959

NBS 503

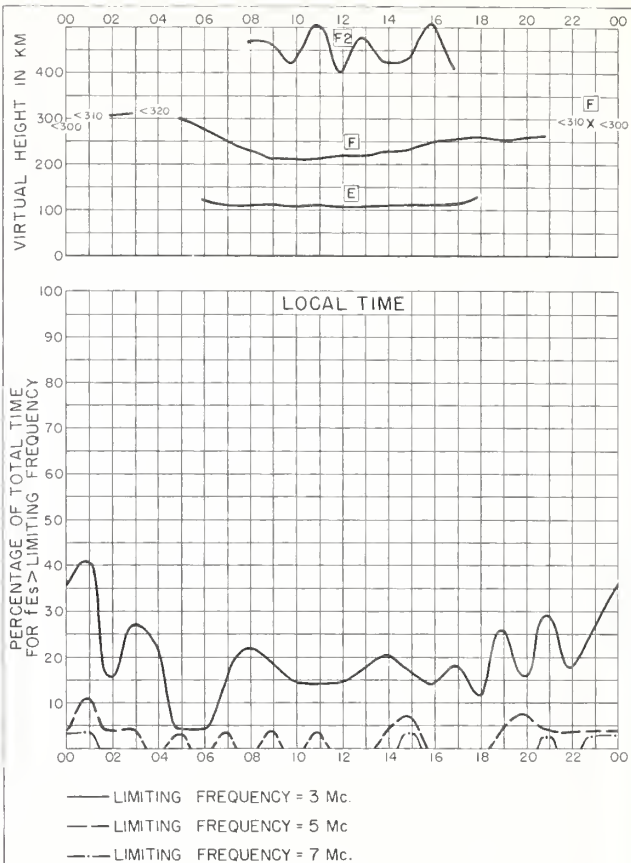


Fig. 62. OTTAWA, CANADA

SEPTEMBER 1959

NBS 490

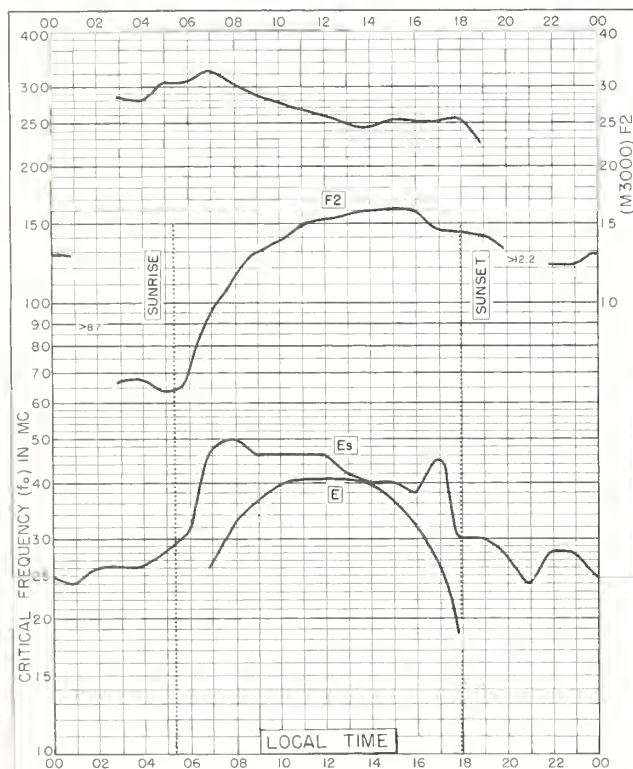


Fig. 63. DAKAR, FRENCH W. AFRICA
14.8°N, 17.4°W

SEPTEMBER 1959

NBS 503

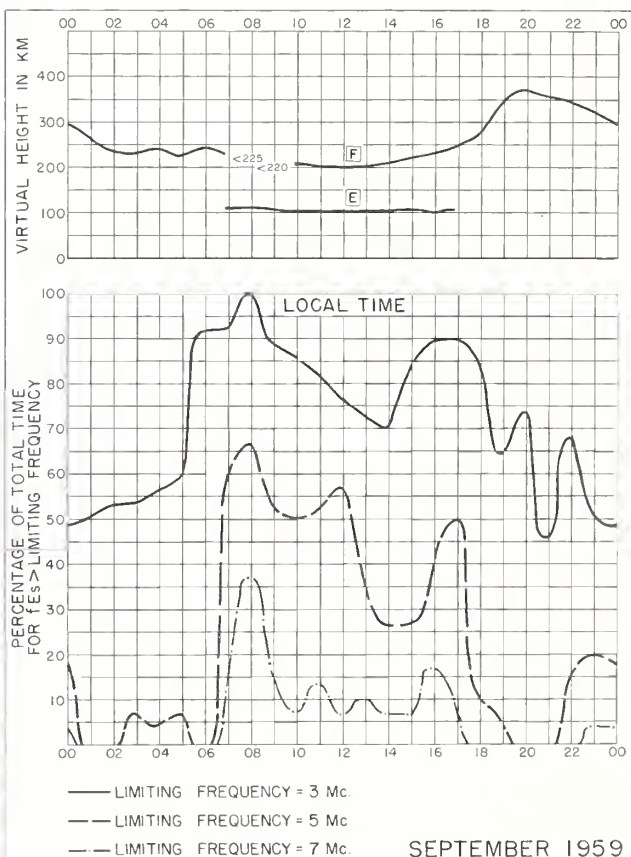


Fig. 64. DAKAR, FRENCH W. AFRICA

SEPTEMBER 1959

NBS 490

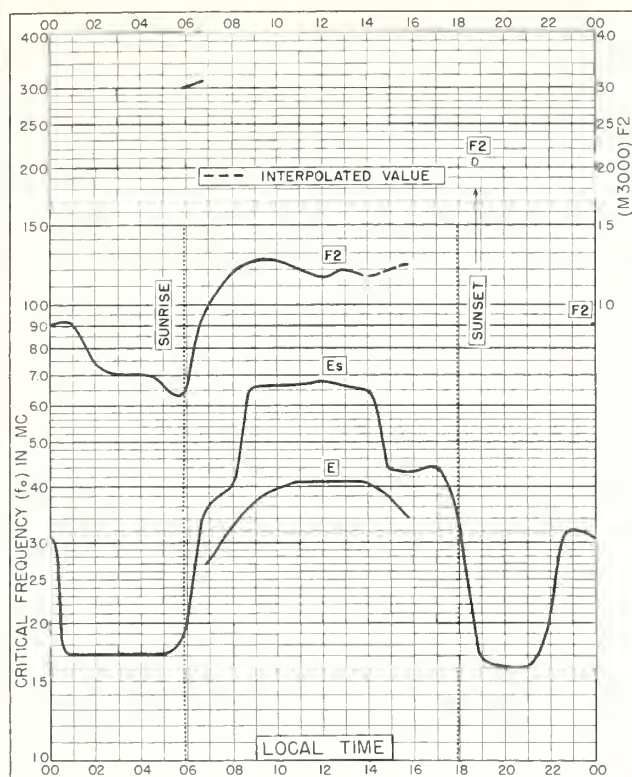


Fig. 65. DJIBOUTI, FRENCH SOMALILAND
11.6°N, 43.2°E SEPTEMBER 1959

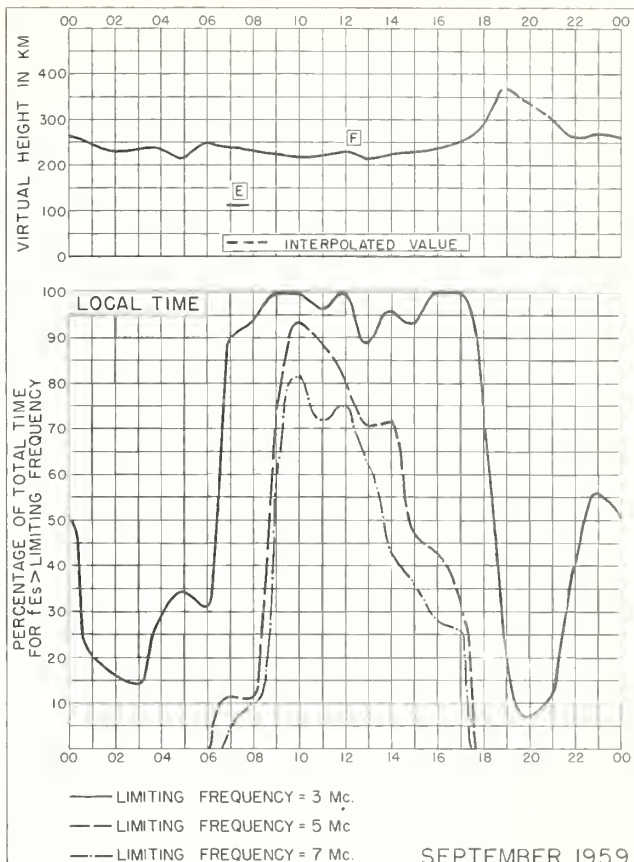


Fig. 66. DJIBOUTI, FRENCH SOMALILAND

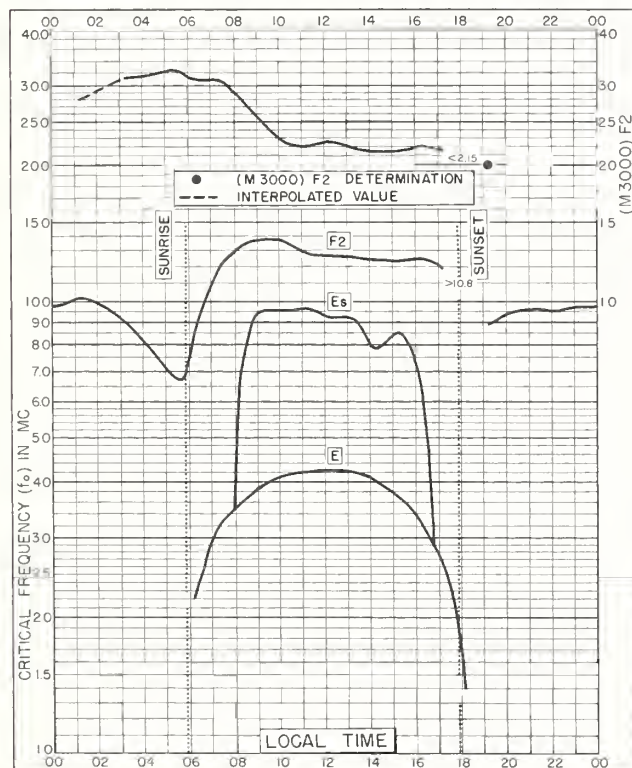


Fig. 67. IBADAN, NIGERIA
7.4°N, 3.9°E SEPTEMBER 1959

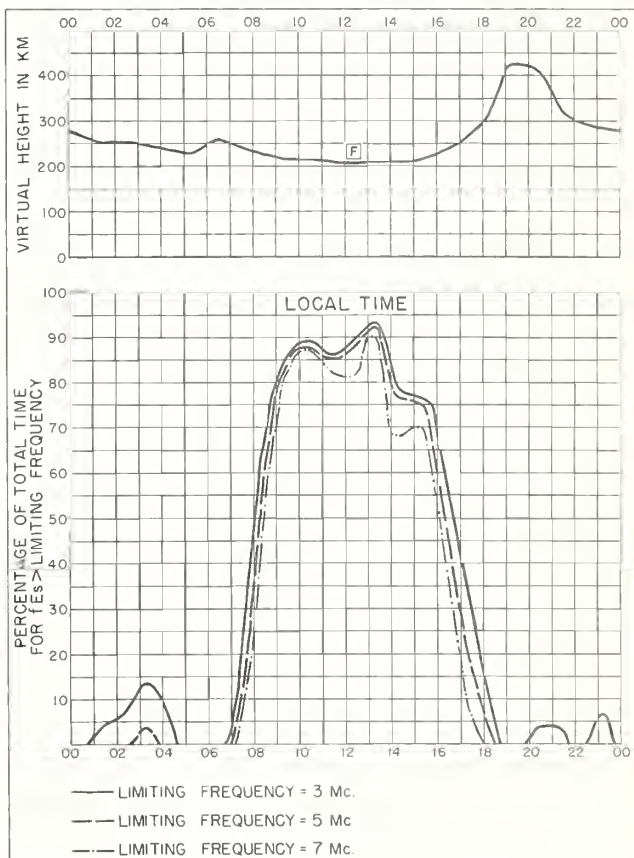


Fig. 68. IBADAN, NIGERIA SEPTEMBER 1959

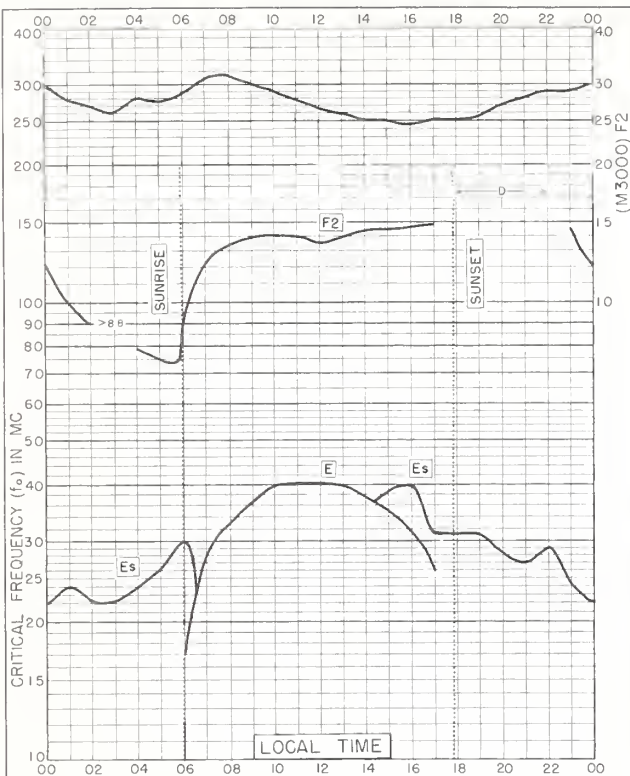


Fig. 69. TAHITI, SOCIETY IS.
17.7°S, 149.3°W SEPTEMBER 1959

NBS 503

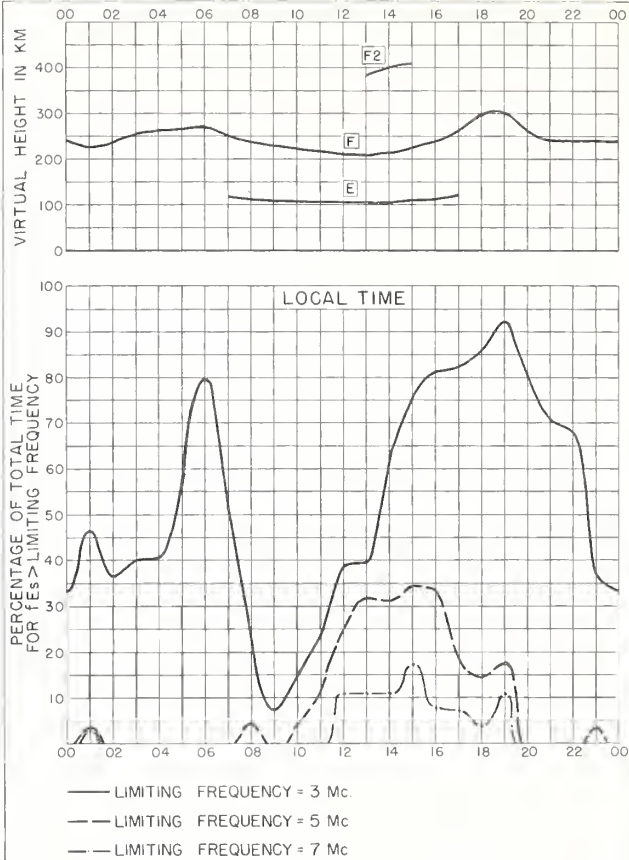


Fig. 70. TAHITI, SOCIETY IS. SEPTEMBER 1959

NBS 490

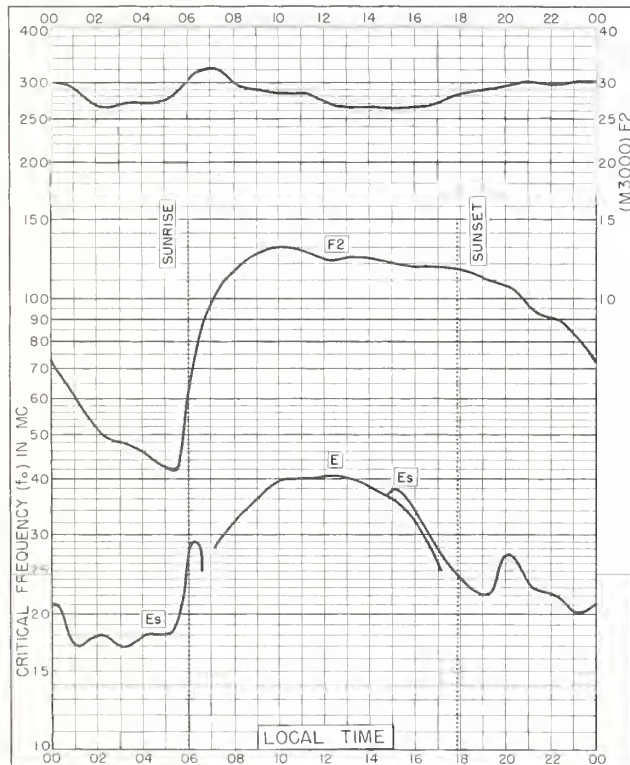


Fig. 71. TANANARIVE, MADAGASCAR
18.8°S, 47.5°E SEPTEMBER 1959

NBS 503

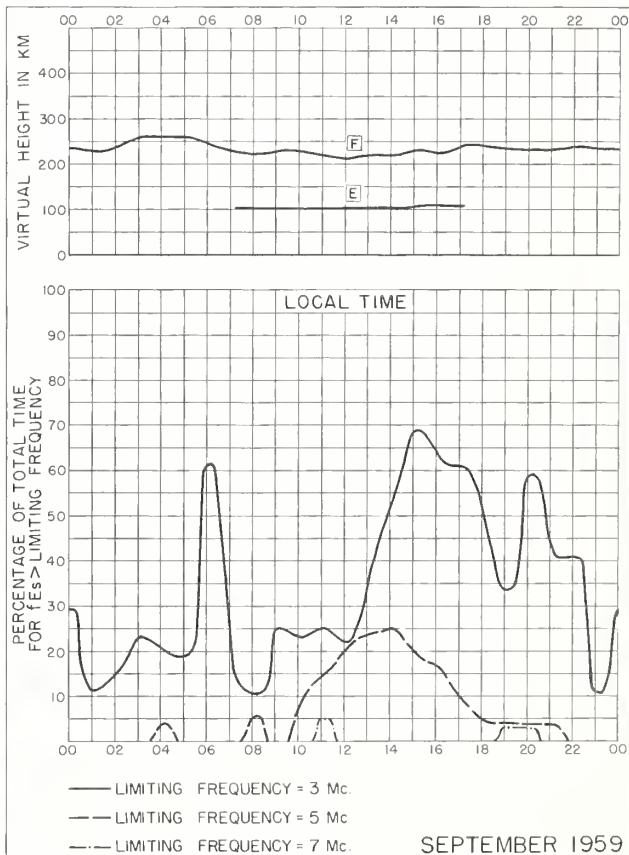


Fig. 72. TANANARIVE, MADAGASCAR
SEPTEMBER 1959

NBS 490

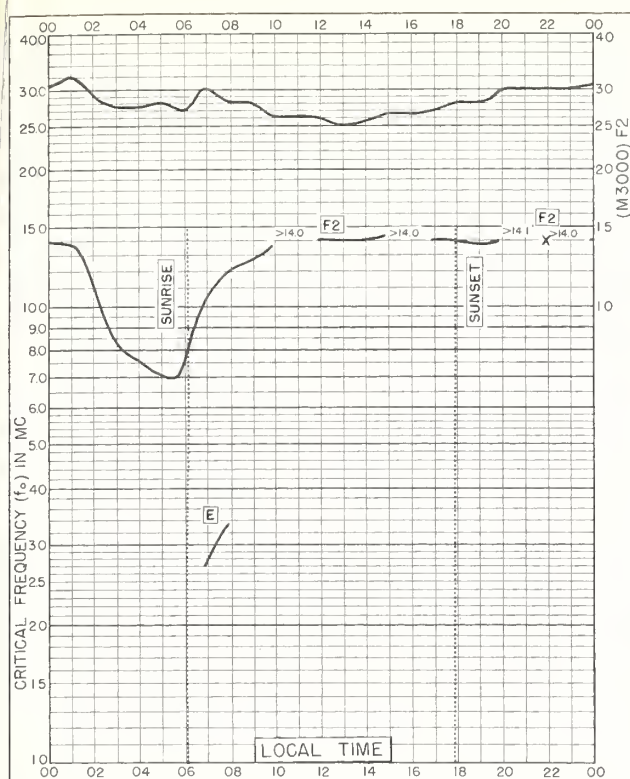


Fig. 73. SAO PAULO, BRAZIL
23.5°S, 46.5°W SEPTEMBER 1959

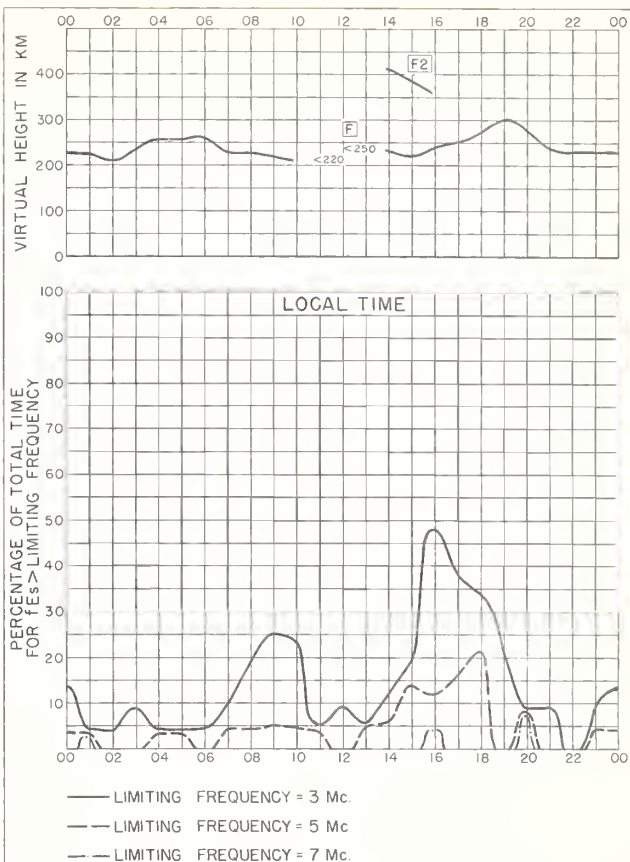


Fig. 74. SAO PAULO, BRAZIL SEPTEMBER 1959

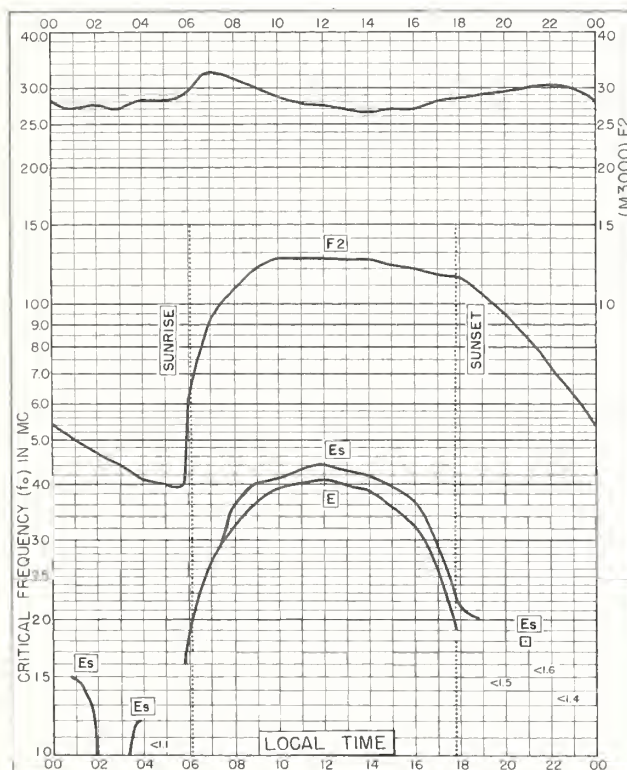


Fig. 75. JOHANNESBURG, UNION OF S. AFRICA
26.1°S, 28.1°E SEPTEMBER 1959

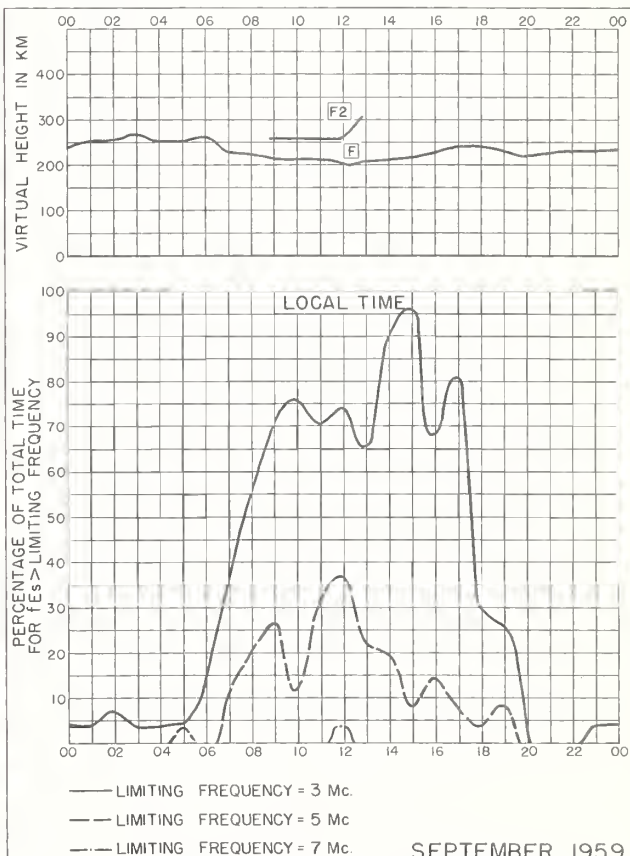


Fig. 76. JOHANNESBURG, UNION OF S. AFRICA
SEPTEMBER 1959

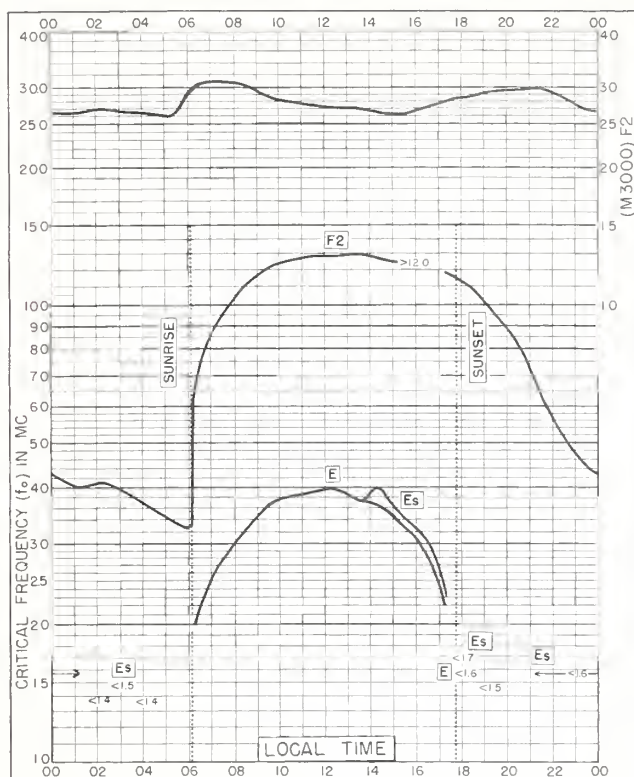


Fig. 77. CAPE TOWN, UNION OF S. AFRICA
34.1°S, 18.3°E SEPTEMBER 1959

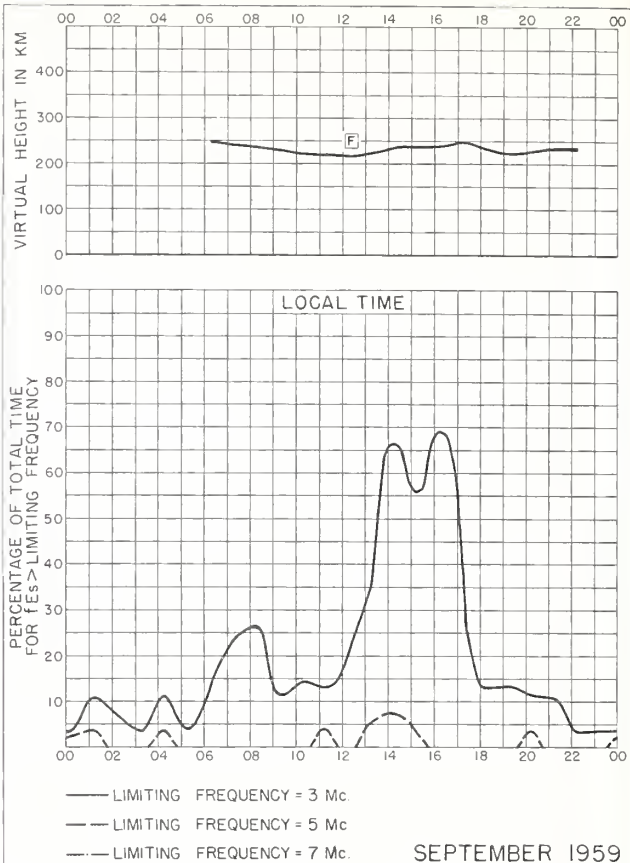


Fig. 78. CAPE TOWN, UNION OF S. AFRICA
SEPTEMBER 1959

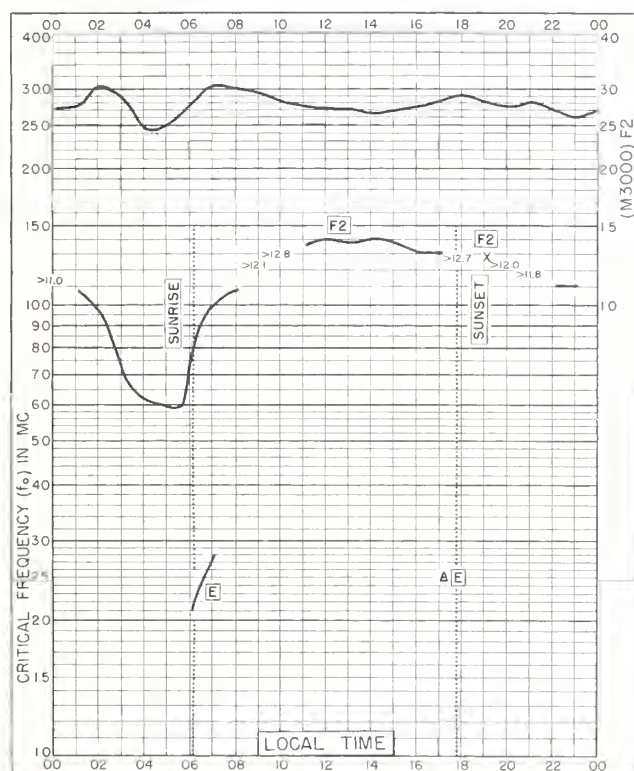


Fig. 79. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W SEPTEMBER 1959

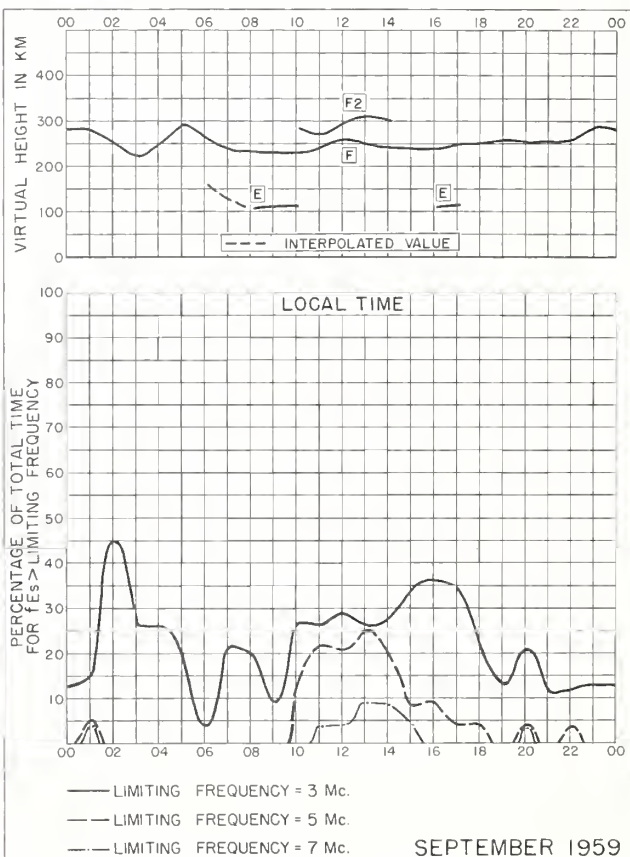


Fig. 80. BUENOS AIRES, ARGENTINA
SEPTEMBER 1959

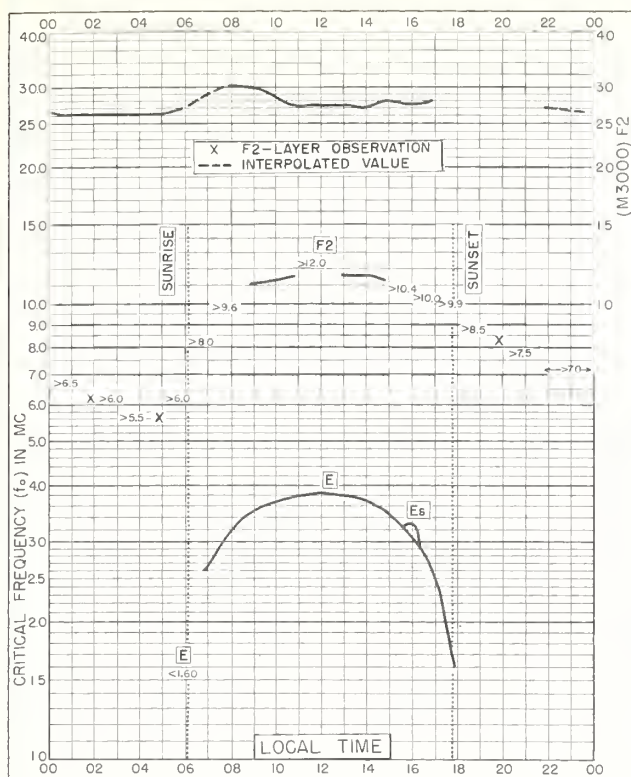


Fig. 81. CANBERRA, AUSTRALIA
35.3°S, 149.0°E SEPTEMBER 1959

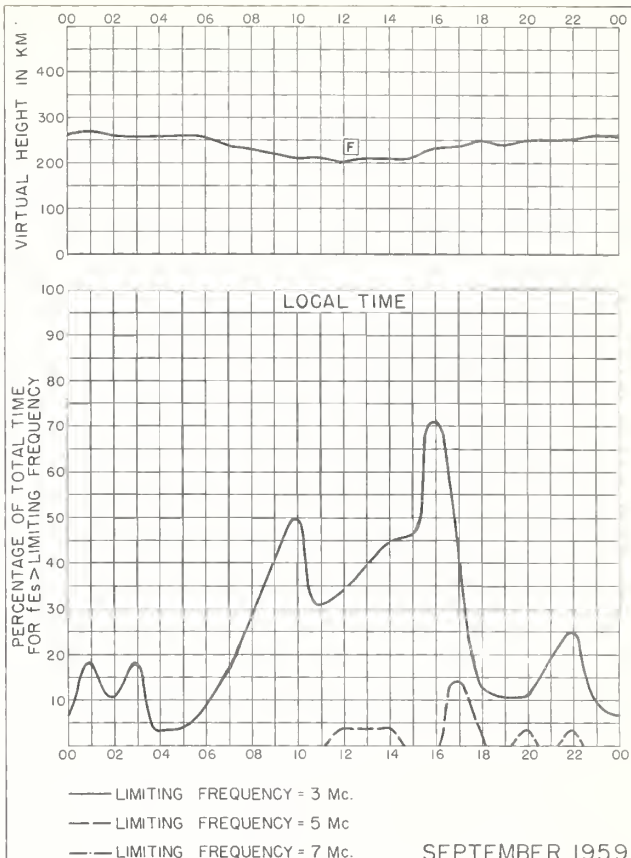


Fig. 82. CANBERRA, AUSTRALIA



Fig. 83. TRELEW, ARGENTINA
43.2°S, 65.3°W SEPTEMBER 1959

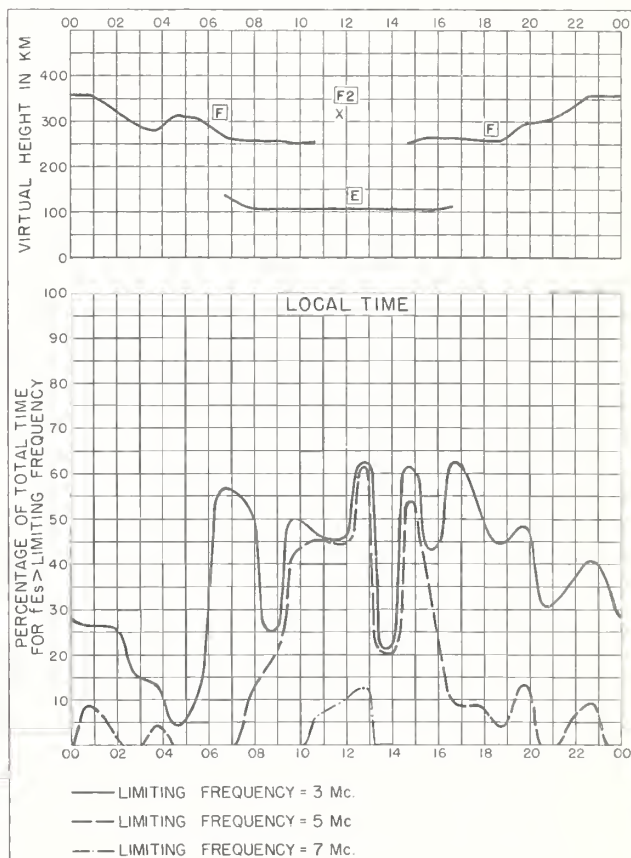


Fig. 84. TRELEW, ARGENTINA SEPTEMBER 1959

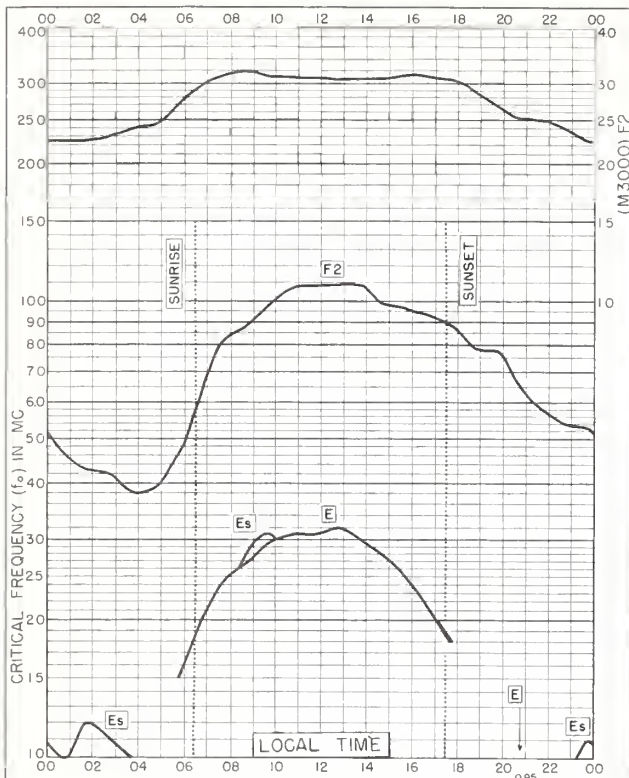


Fig. 85. PORT LOCKROY
64.8°S, 63.5°W

SEPTEMBER 1959

NBS 503

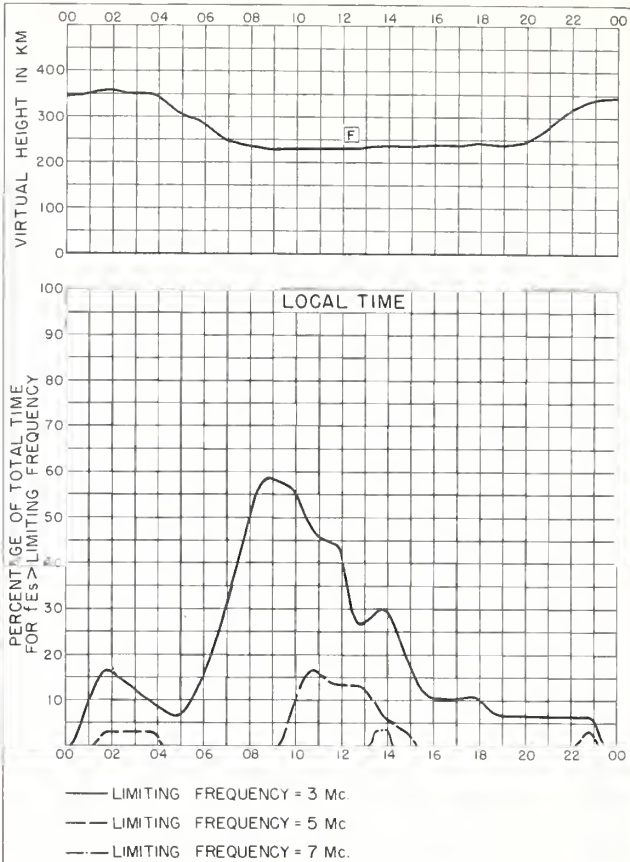


Fig. 86. PORT LOCKROY

SEPTEMBER 1959

NBS 490

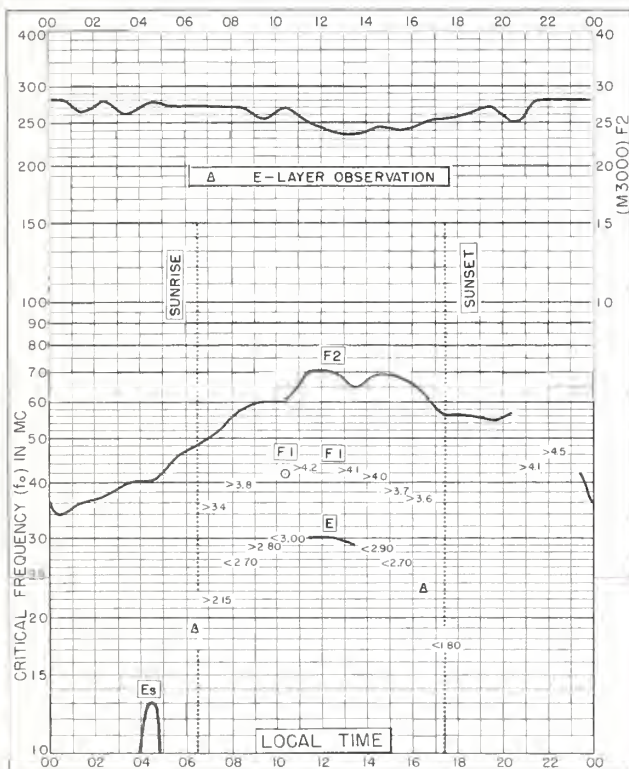


Fig. 87. WILKES STATION
66.9°S, 110.5°E

SEPTEMBER 1959

NBS 503

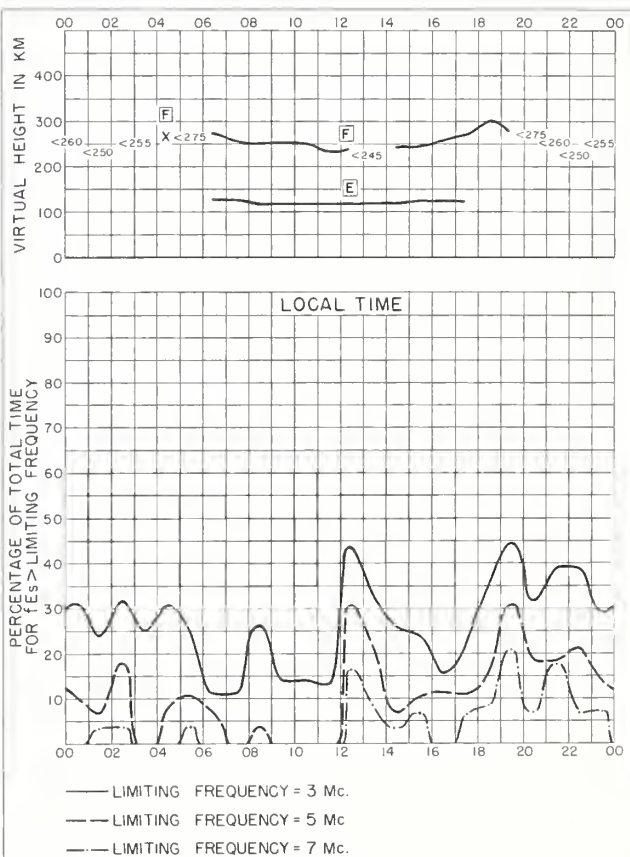


Fig. 88. WILKES STATION

SEPTEMBER 1959

NBS 490

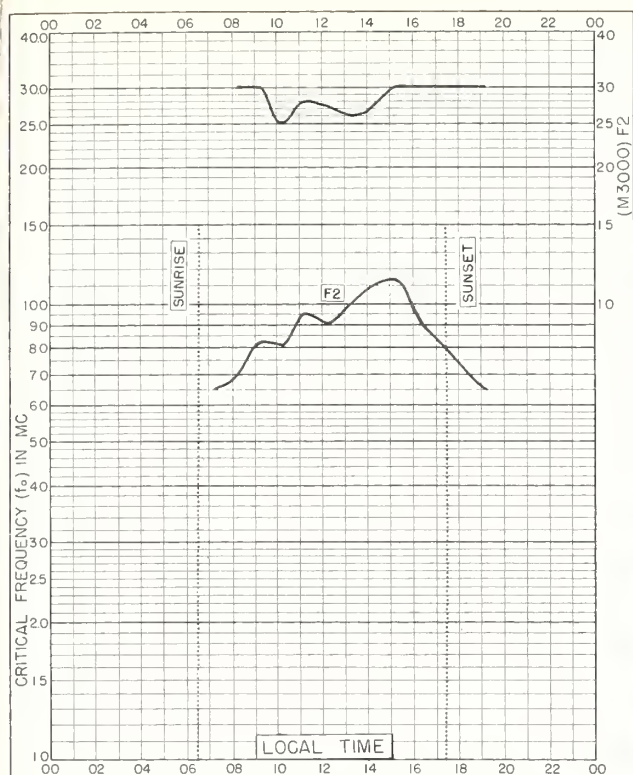


Fig. 89. MAWSON
67.6°S, 62.9°E SEPTEMBER 1959

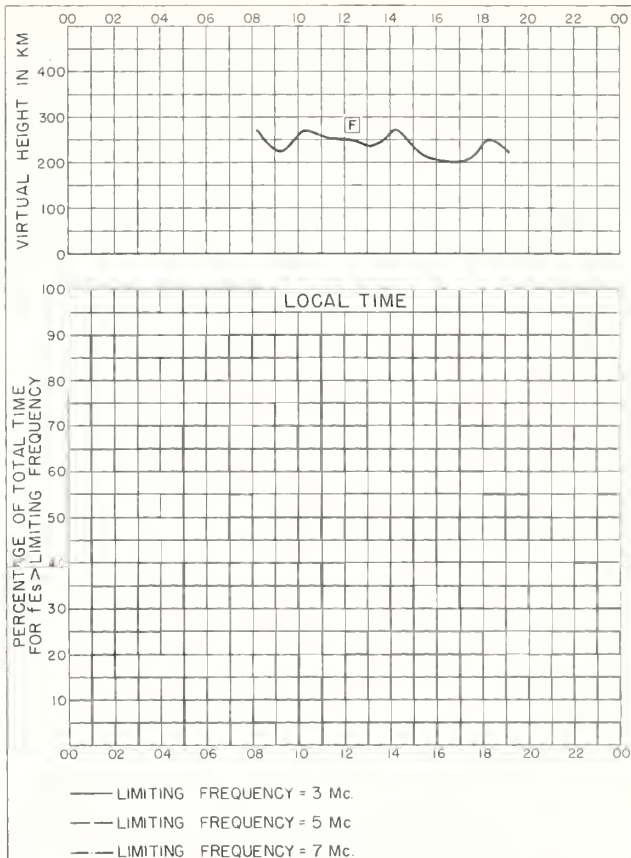


Fig. 90. MAWSON SEPTEMBER 1959

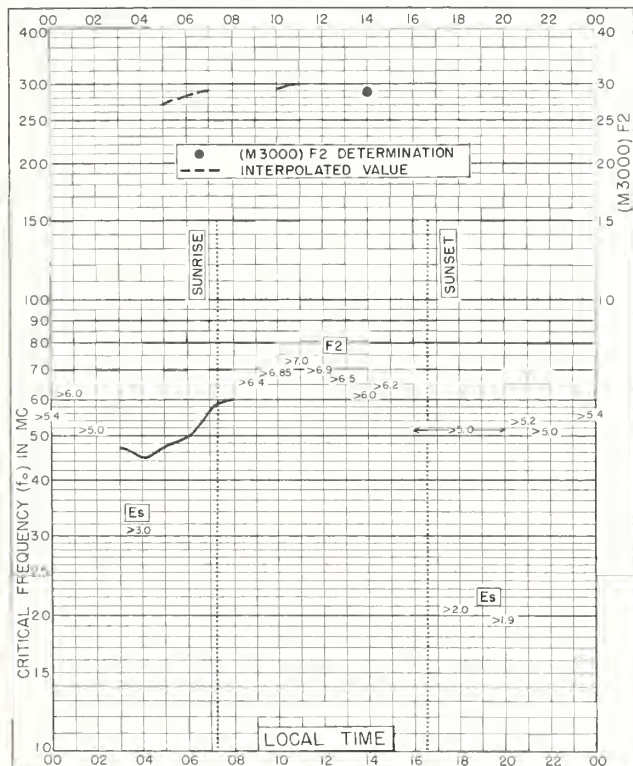


Fig. 91. BYRD STATION
80.0°S, 120.0°W SEPTEMBER 1959

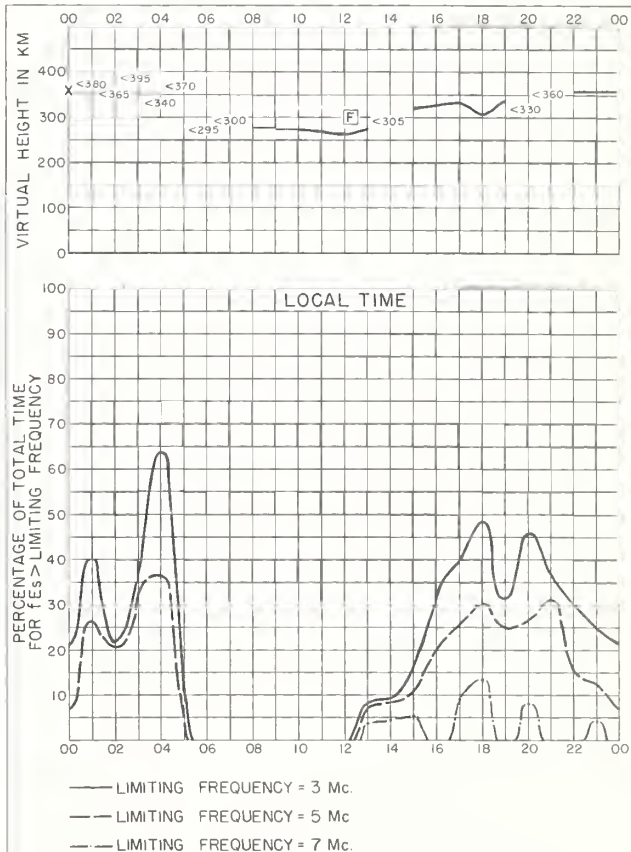


Fig. 92. BYRD STATION SEPTEMBER 1959

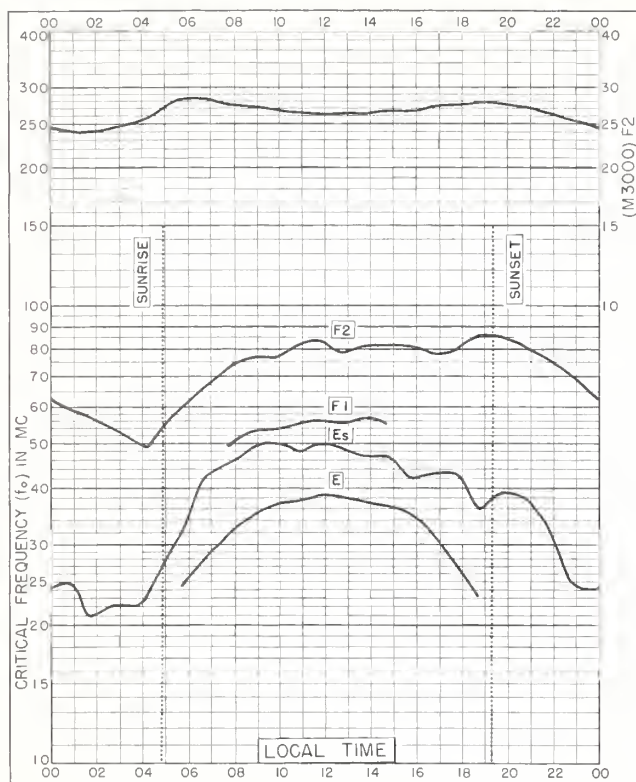


Fig. 93. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E AUGUST 1959

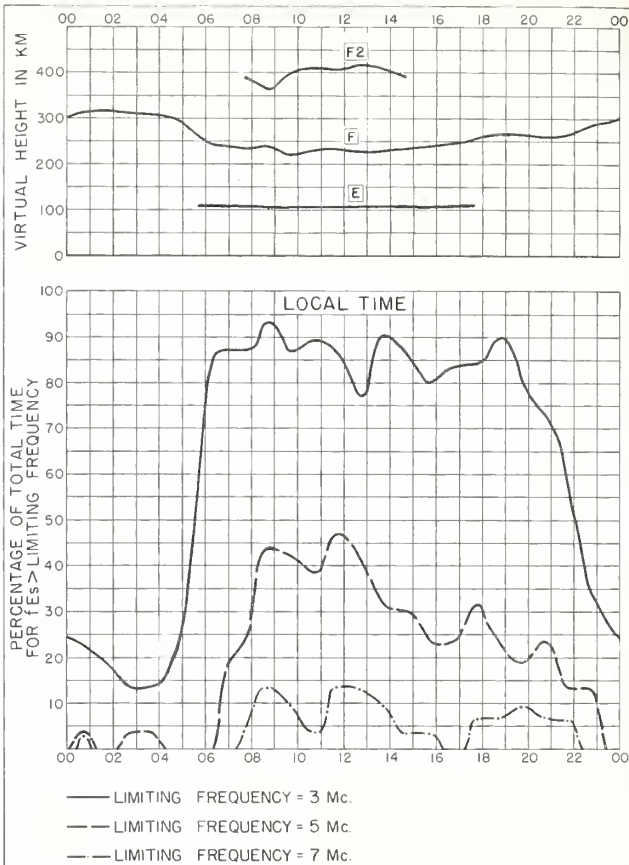


Fig. 94. LINDAU/HARZ, GERMANY AUGUST 1959

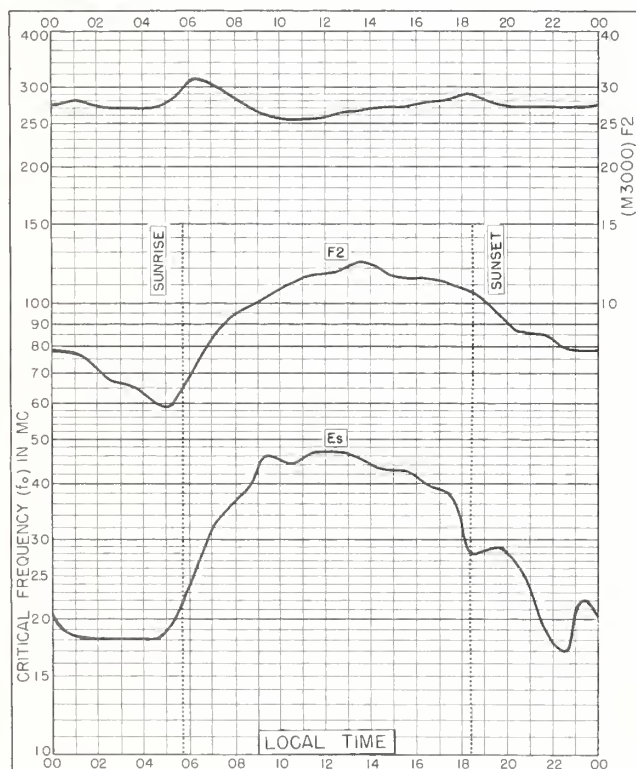


Fig. 95. EL CERILLO, MEXICO
19.3°N, 99.5°W AUGUST 1959

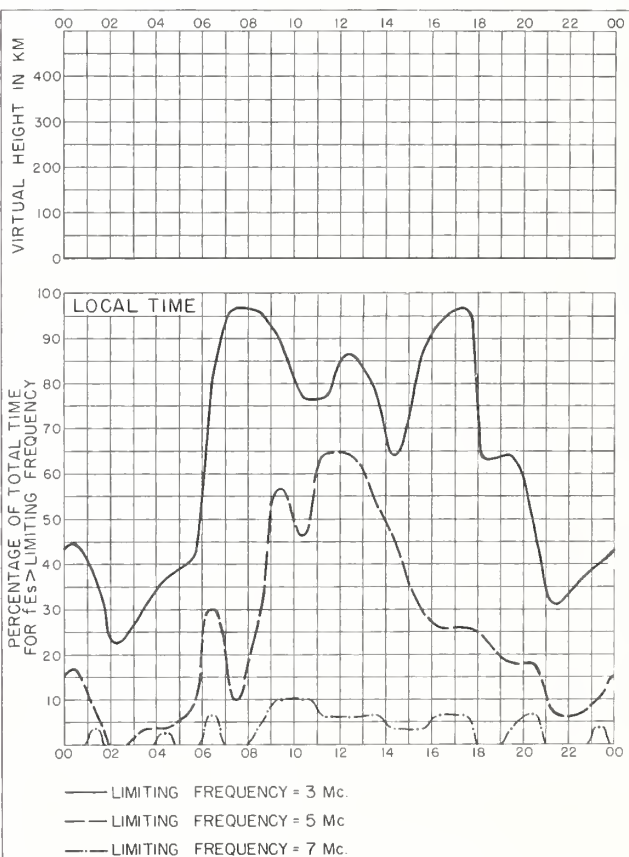


Fig. 96. EL CERILLO, MEXICO AUGUST 1959

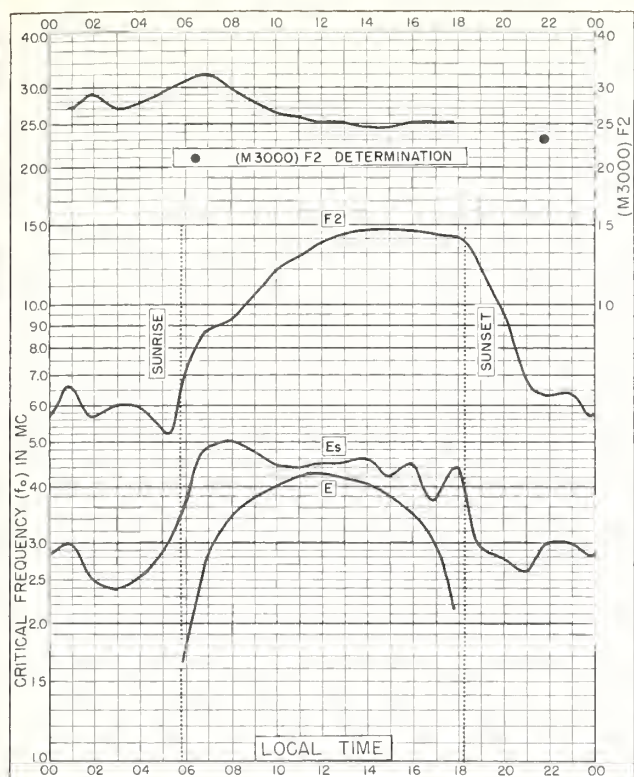


Fig. 97. DAKAR, FRENCH W. AFRICA
14.8°N, 17.4°W
AUGUST 1959

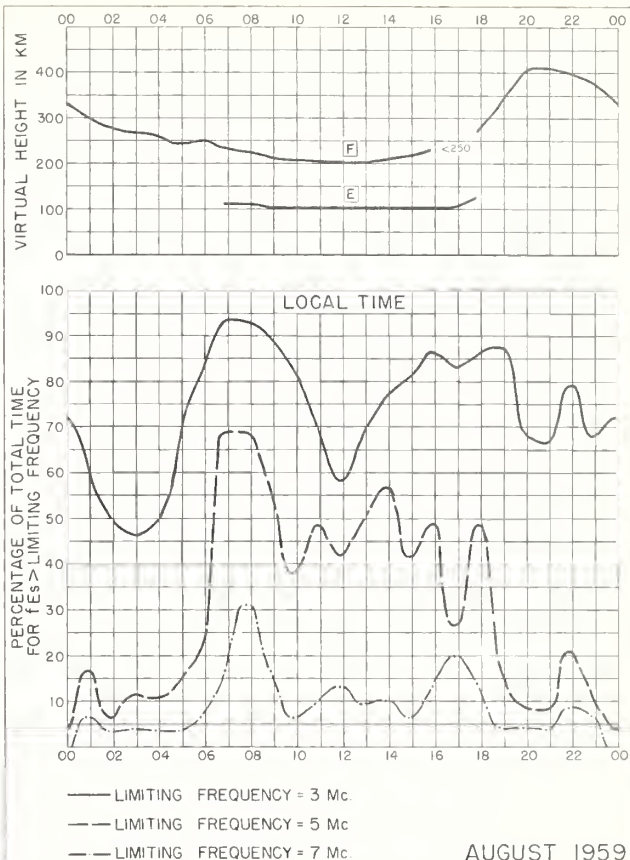


Fig. 98. DAKAR, FRENCH W. AFRICA

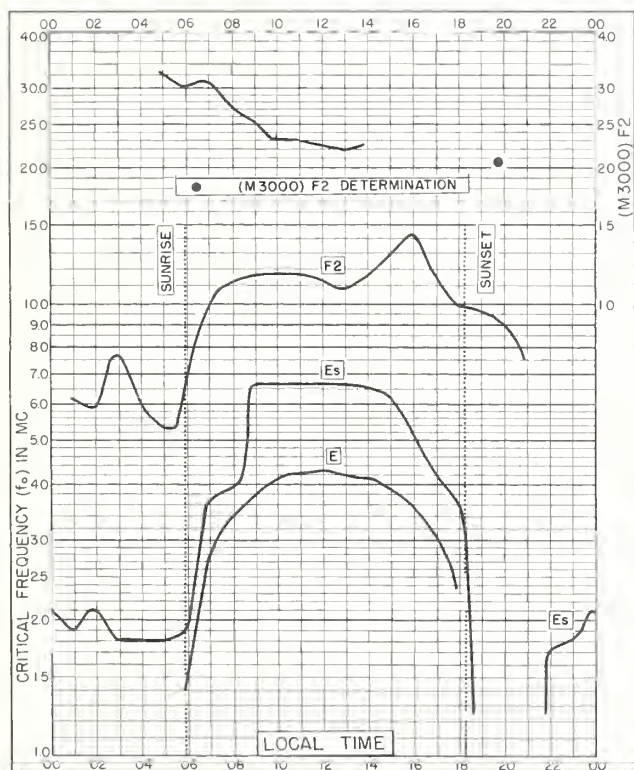


Fig. 99. DJIBOUTI, FRENCH SOMALILAND
11.6°N, 43.2°E
AUGUST 1959

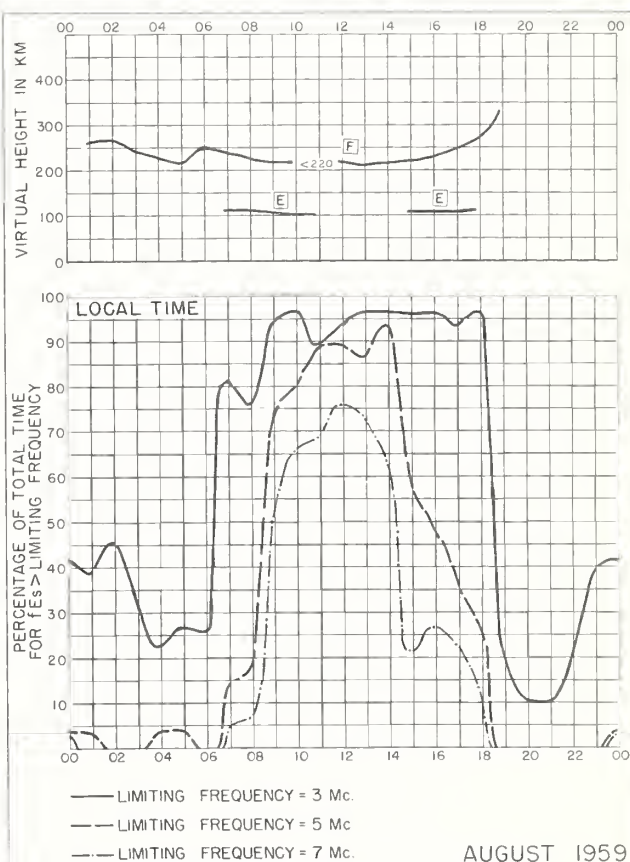


Fig. 100. DJIBOUTI, FRENCH SOMALILAND

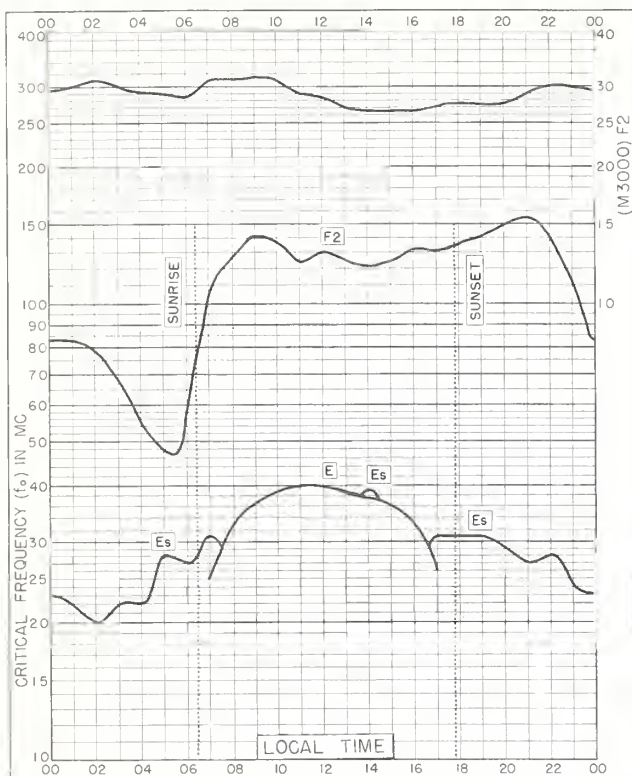


Fig. 101. TAHITI, SOCIETY IS.
17.7°S, 149.3°W

AUGUST 1959

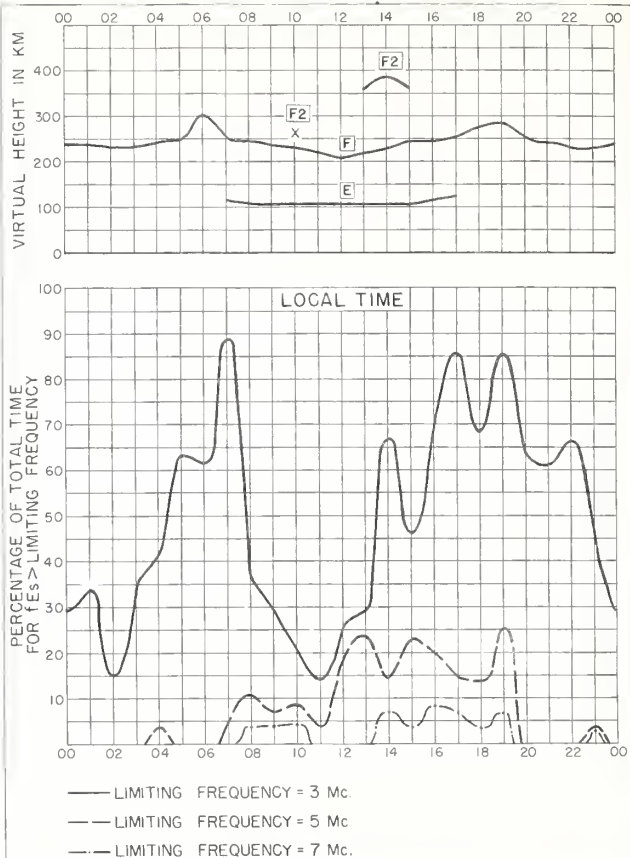


Fig. 102. TAHITI, SOCIETY IS.

AUGUST 1959

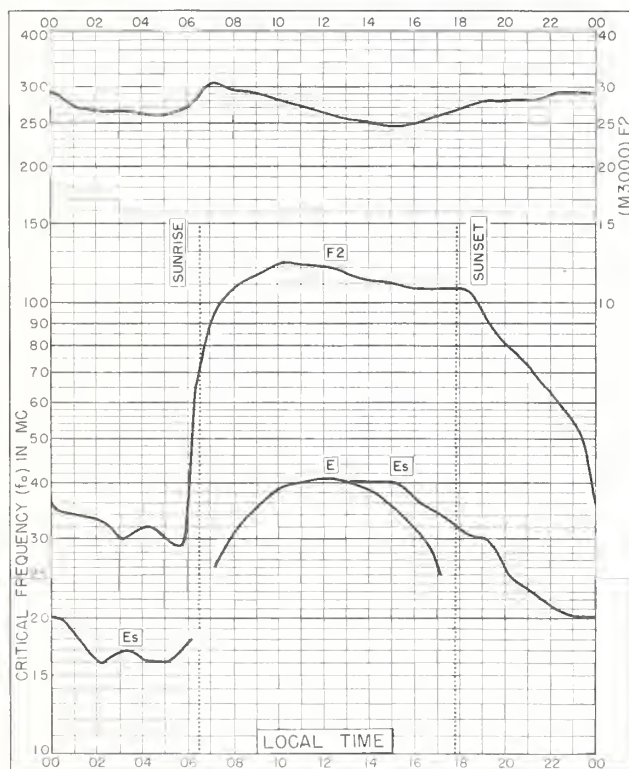


Fig. 103. TANANARIVE, MADAGASCAR
18.8°S, 47.5°E

AUGUST 1959

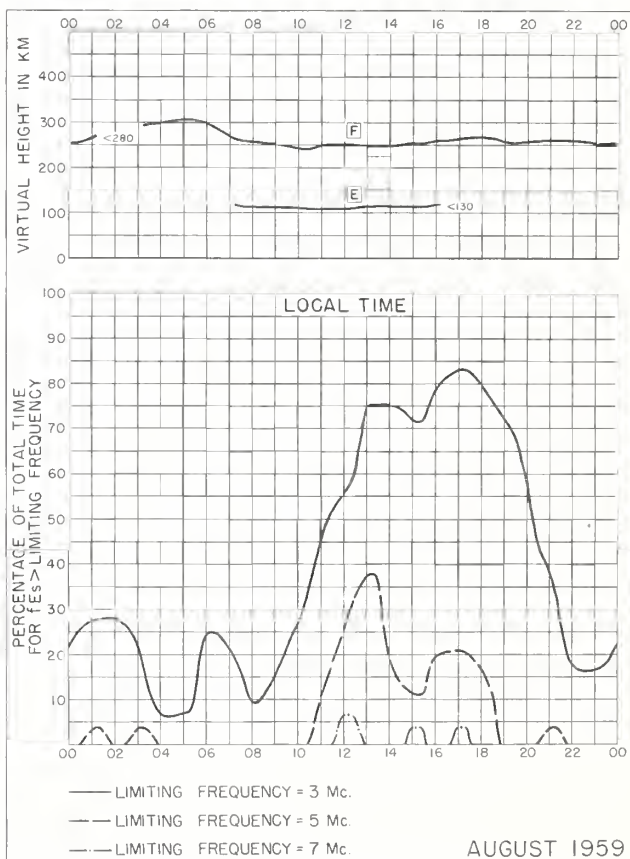


Fig. 104. TANANARIVE, MADAGASCAR

AUGUST 1959

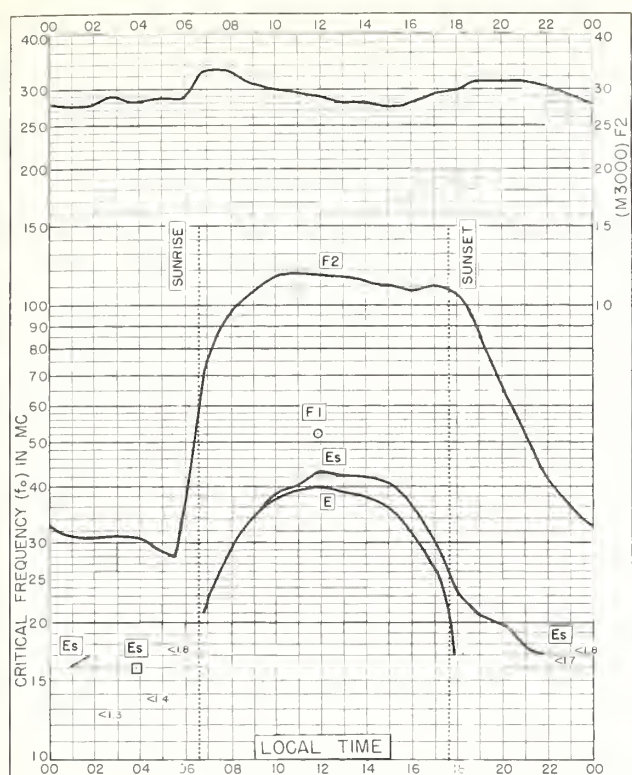


Fig. 105. JOHANNESBURG, UNION OF S. AFRICA
26.1°S, 28.1°E
AUGUST 1959

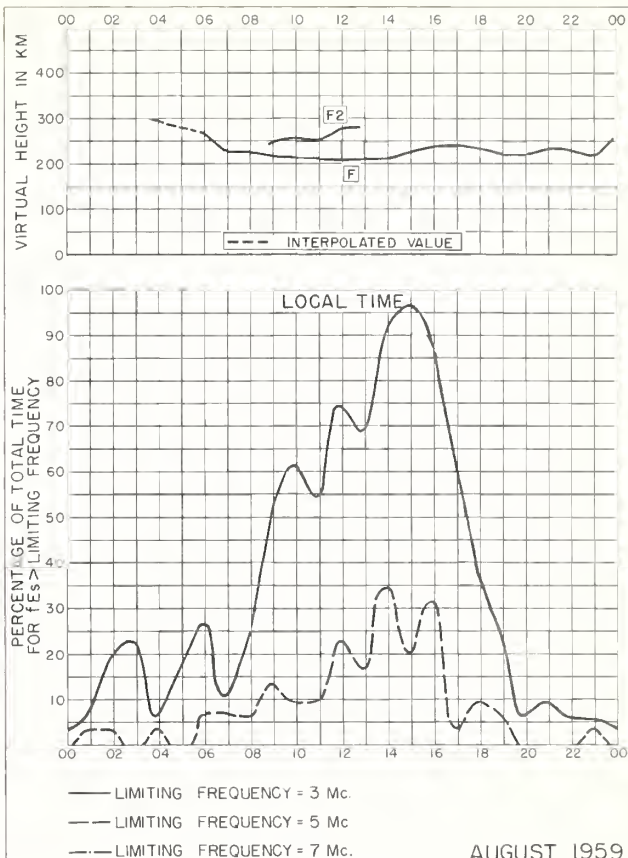


Fig. 106. JOHANNESBURG, UNION OF S. AFRICA
AUGUST 1959

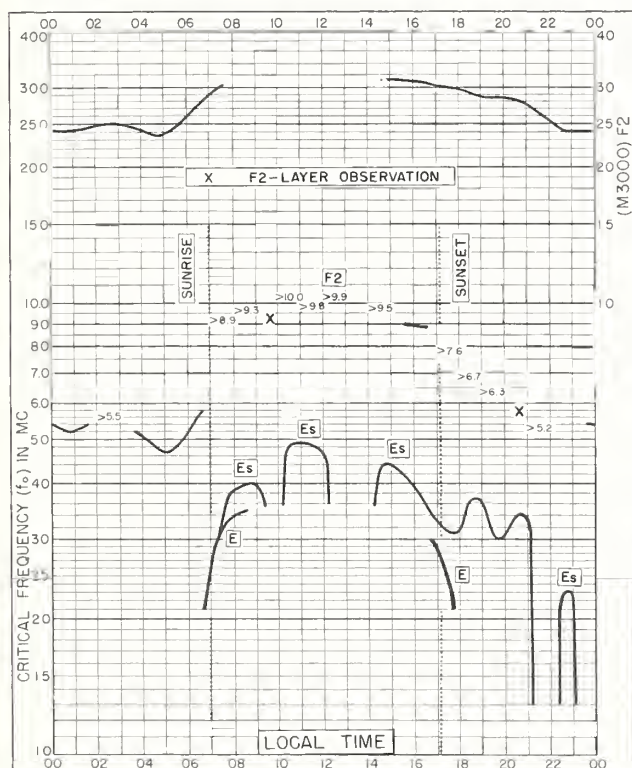


Fig. 107. TRELEW, ARGENTINA
43.2°S, 65.3°W
AUGUST 1959

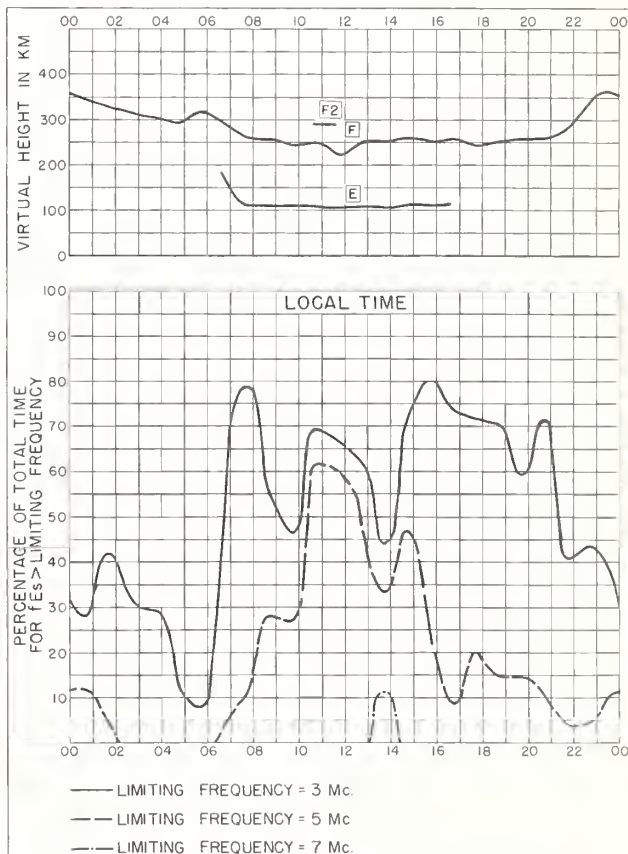


Fig. 108. TRELEW, ARGENTINA
AUGUST 1959

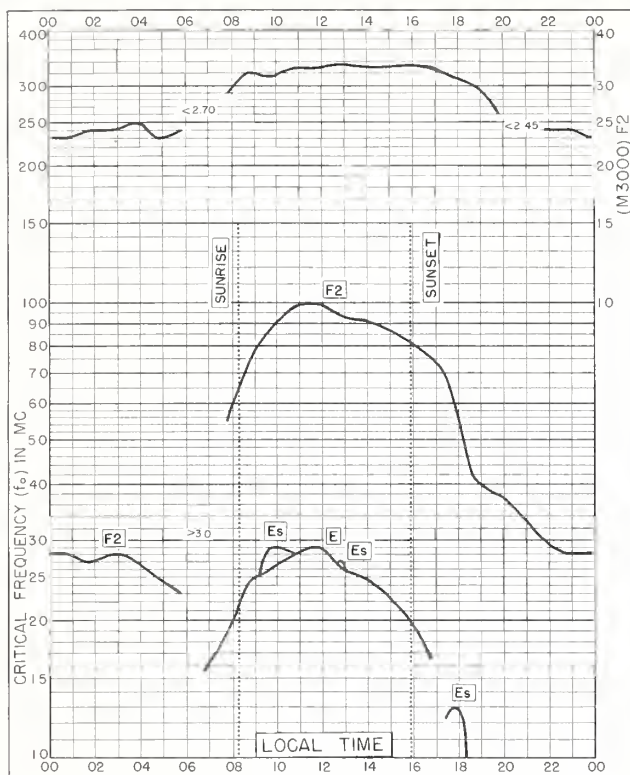


Fig. 109. PORT LOCKROY
64.8°S, 63.5°W

AUGUST 1959

NBS 503

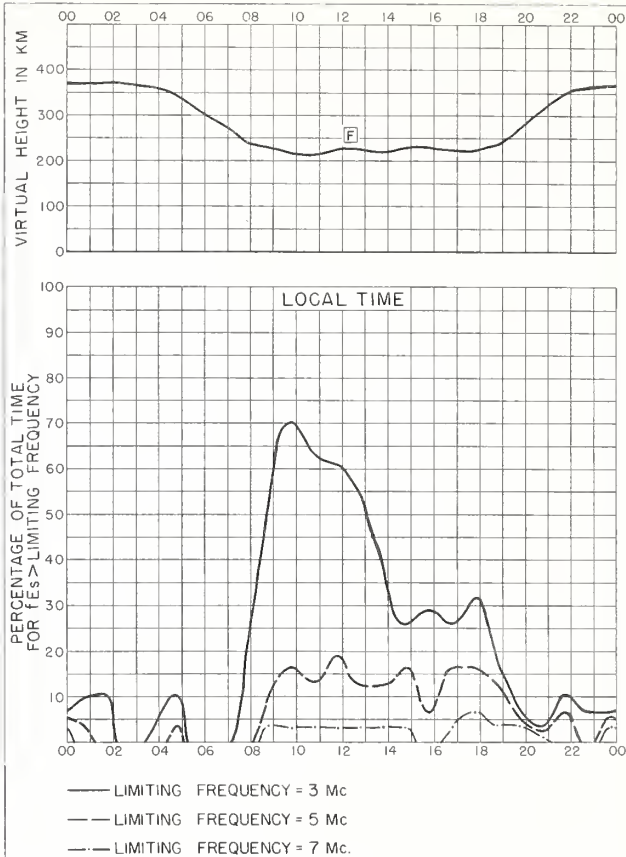


Fig. 110. PORT LOCKROY

AUGUST 1959

NBS 490

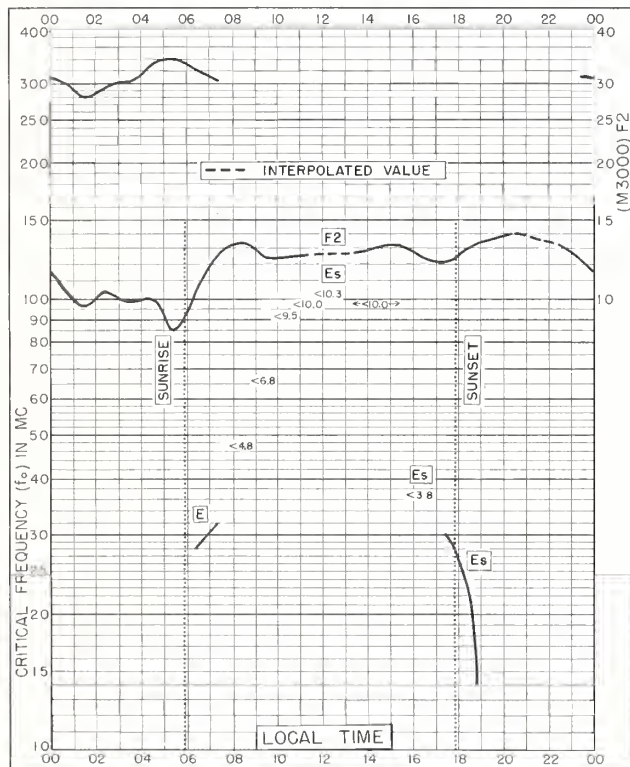


Fig. 111. HOLLANDIA, NETHERLANDS NEW GUINEA
2.5°S, 140.8°E

SEPTEMBER 1958

NBS 503

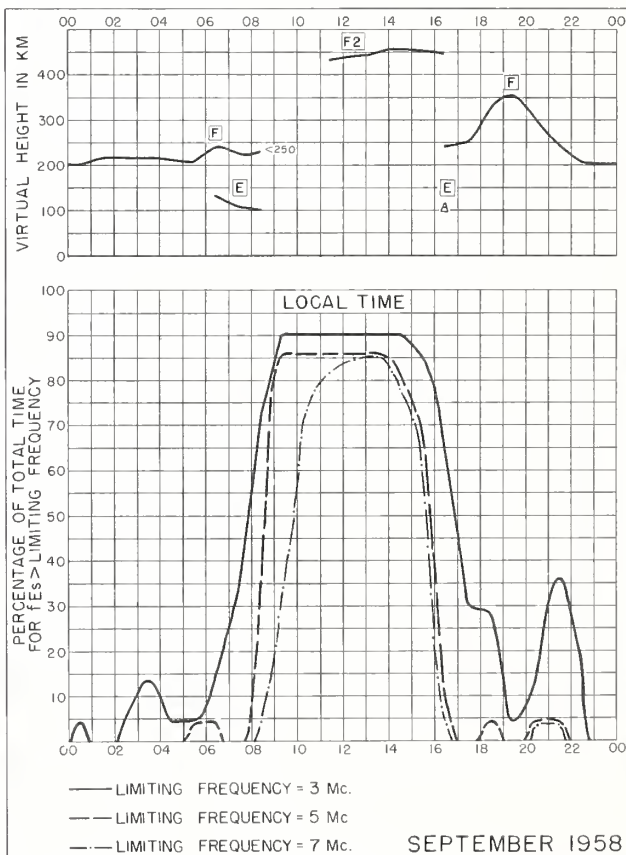


Fig. 112. HOLLANDIA, NETHERLANDS NEW GUINEA

SEPTEMBER 1958

NBS 490

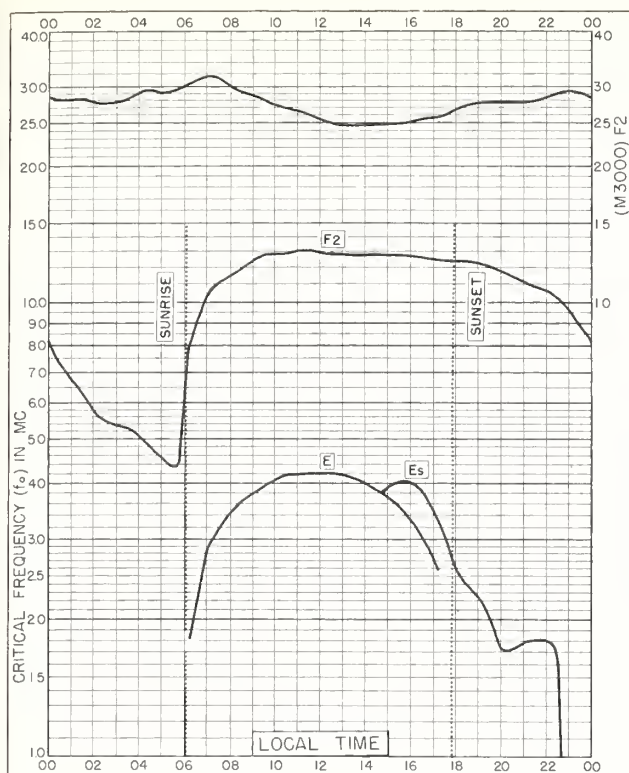


Fig. II3. TSUMEB, SOUTH W. AFRICA
19.2°S, 17.7°E
SEPTEMBER 1958

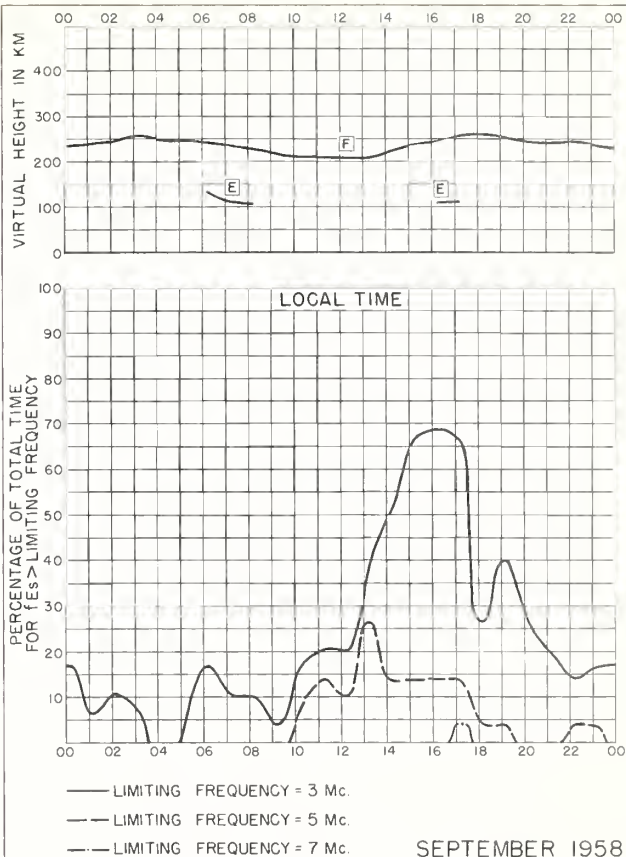


Fig. II4. TSUMEB, SOUTH W. AFRICA
SEPTEMBER 1958



Fig. II5. POITIERS, FRANCE
46.6°N, 0.3°E
AUGUST 1958

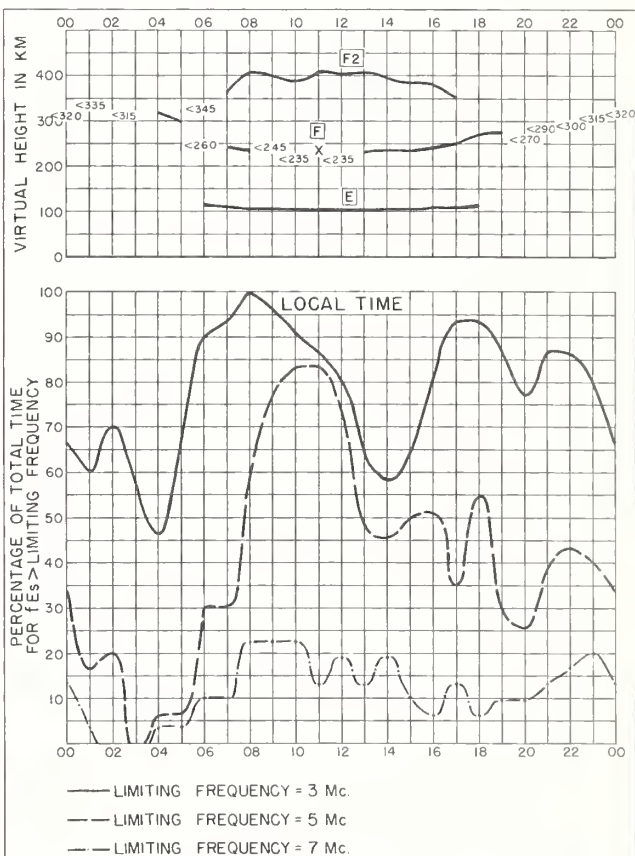


Fig. II6. POITIERS, FRANCE
AUGUST 1958

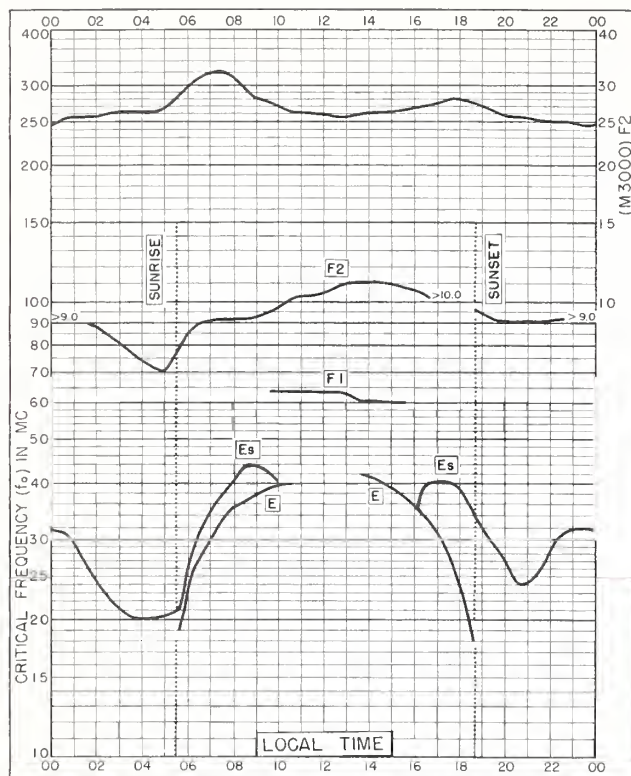


Fig. 117. RABAT, MOROCCO
30.9°N, 6.8°W

AUGUST 1958

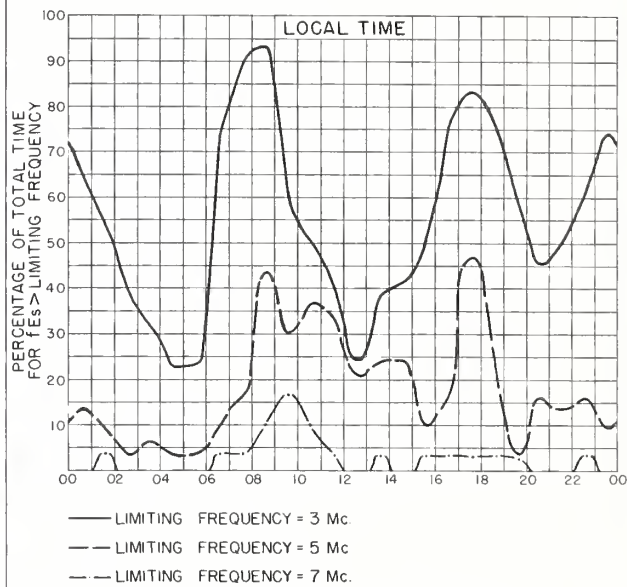
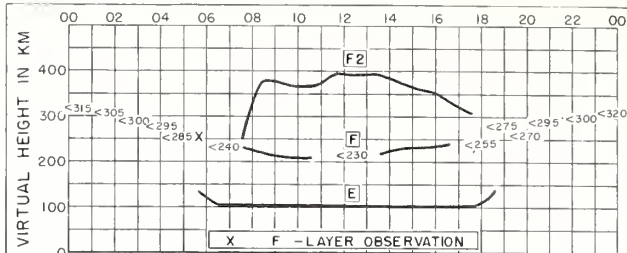


Fig. 118. RABAT, MOROCCO

AUGUST 1958

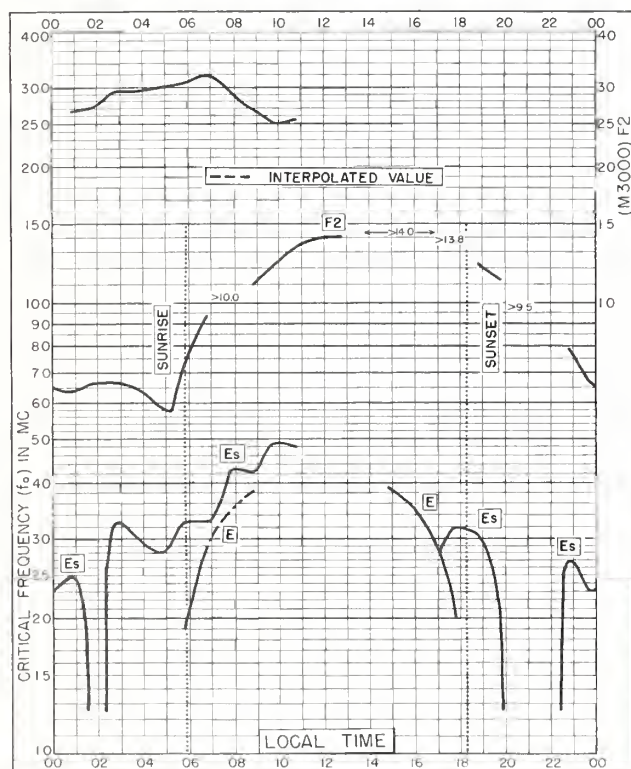


Fig. 119. DAKAR, FRENCH W. AFRICA
14.7°N, 17.4°W

AUGUST 1958

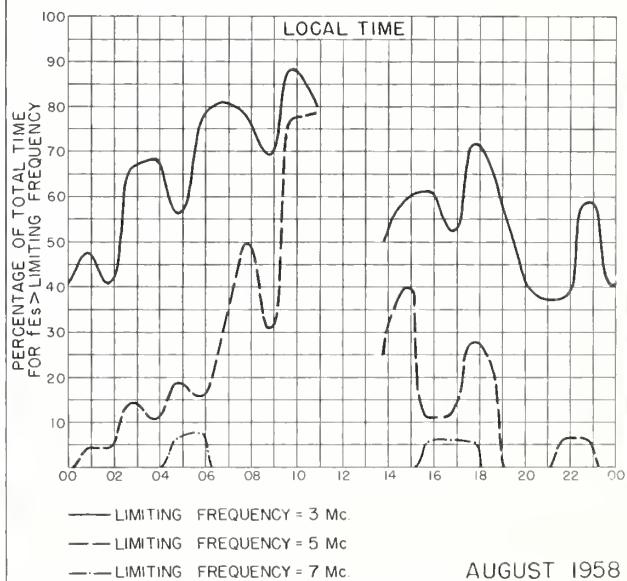
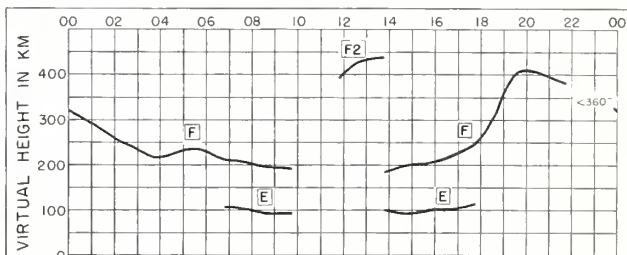


Fig. 120. DAKAR, FRENCH W. AFRICA

AUGUST 1958

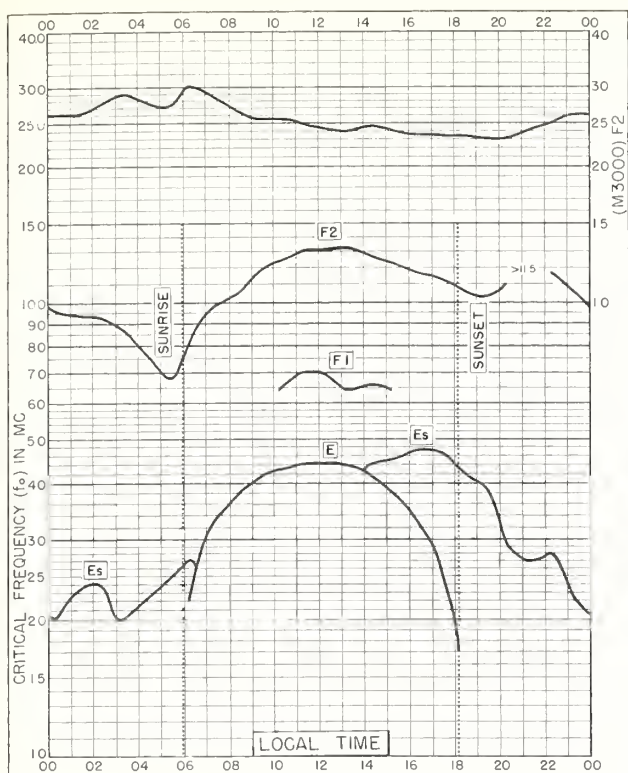


Fig. 121. PARAMARIBO, SURINAM
5.8°N, 55.2°W AUGUST 1958

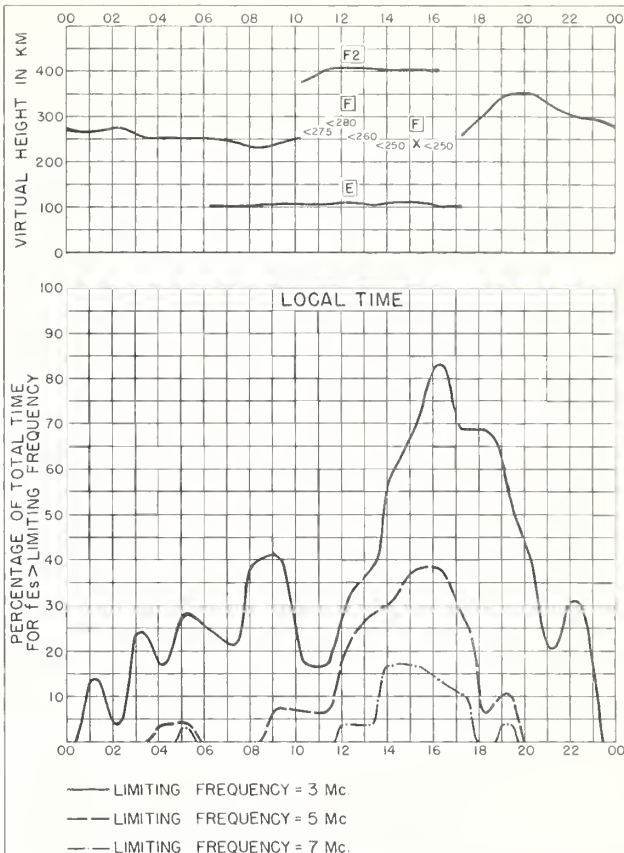


Fig. 122. PARAMARIBO, SURINAM AUGUST 1958

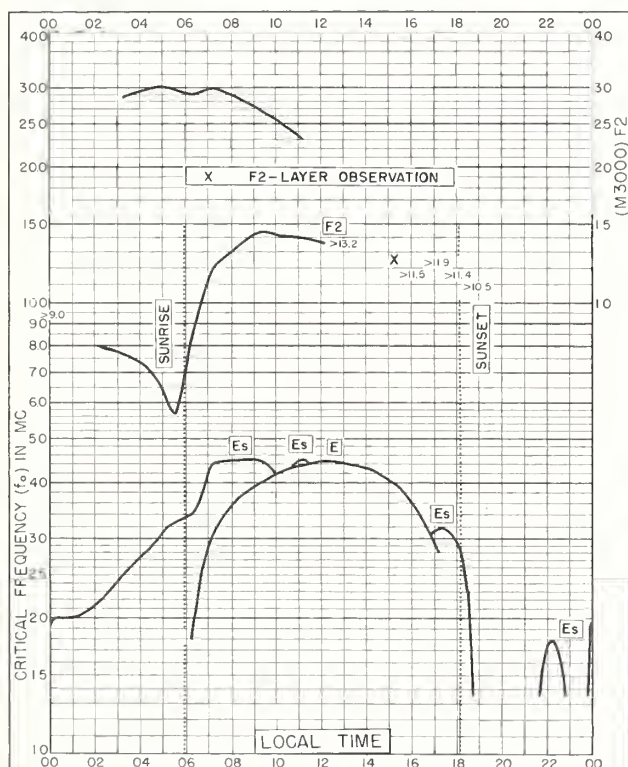


Fig. 123. BANGUI, FRENCH EQUATORIAL AFRICA
4.6°N, 18.6°E AUGUST 1958

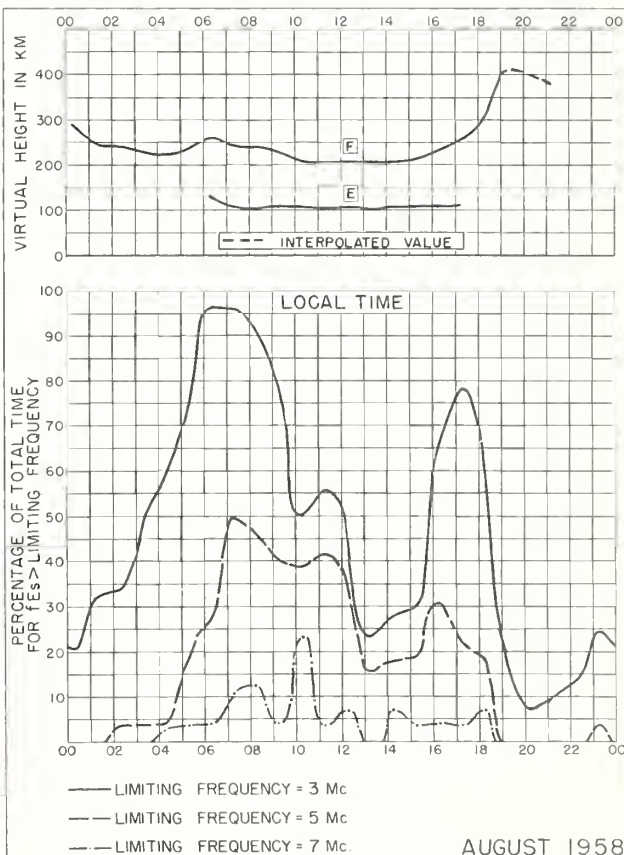


Fig. 124. BANGUI, FRENCH EQUATORIAL AFRICA AUGUST 1958

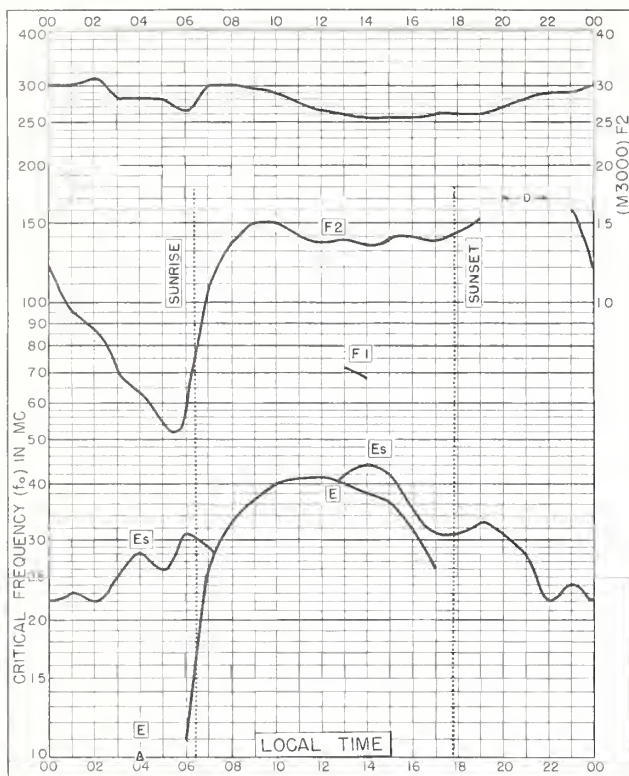


Fig. 125. TAHITI, SOCIETY IS.
17. 7°S, 149.3°W

AUGUST 1958

NBS 503

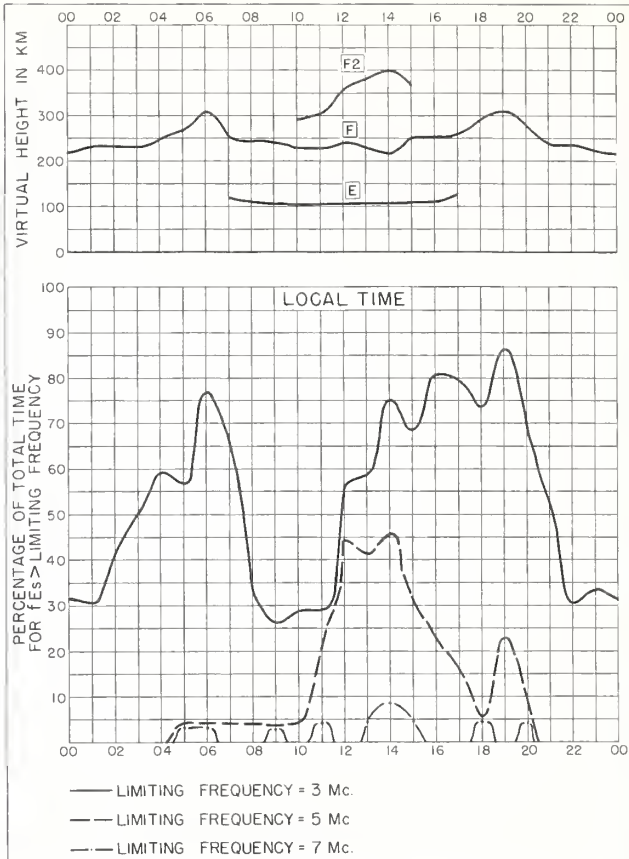


Fig. 126. TAHITI, SOCIETY IS. AUGUST 1958

NBS 490

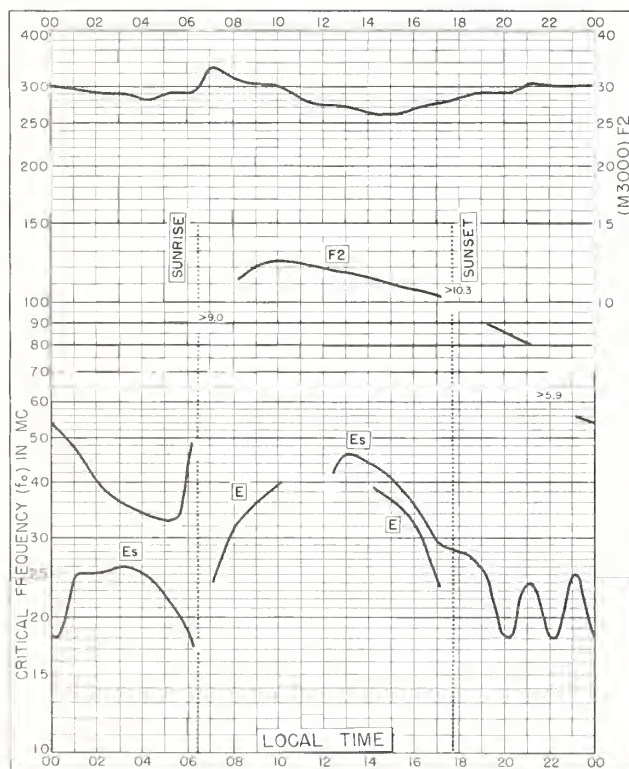


Fig. 127. TANANARIVE, MADAGASCAR
18.8°S, 47.5°E

AUGUST 1958

NBS 503

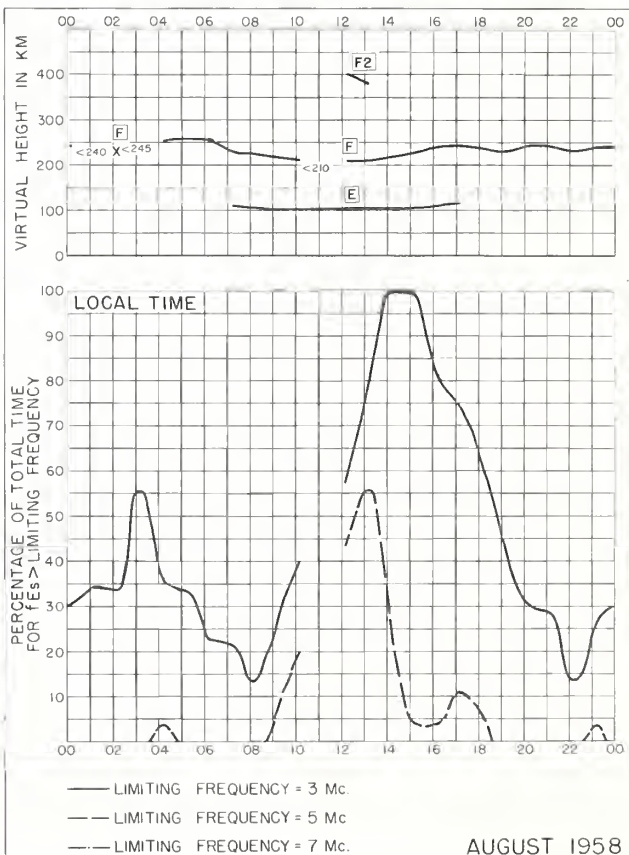
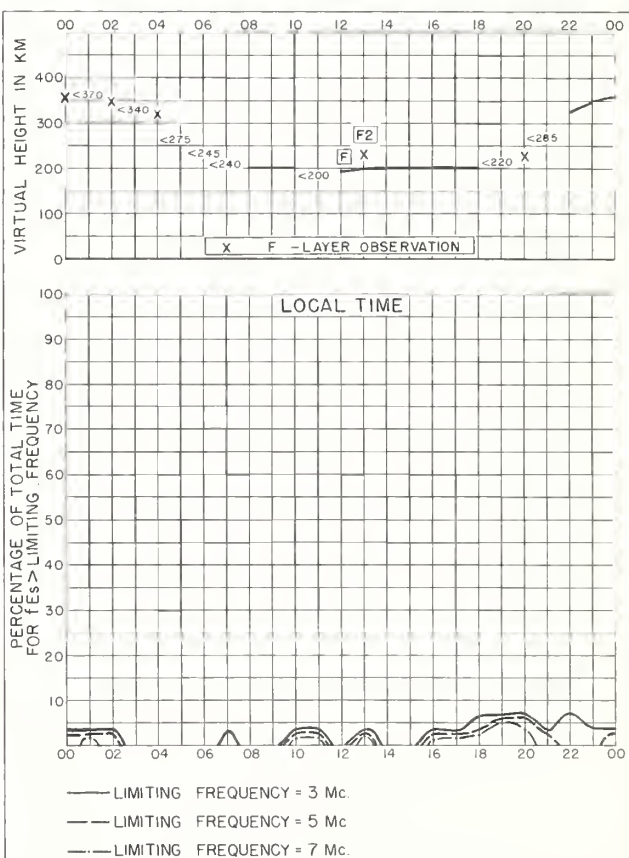
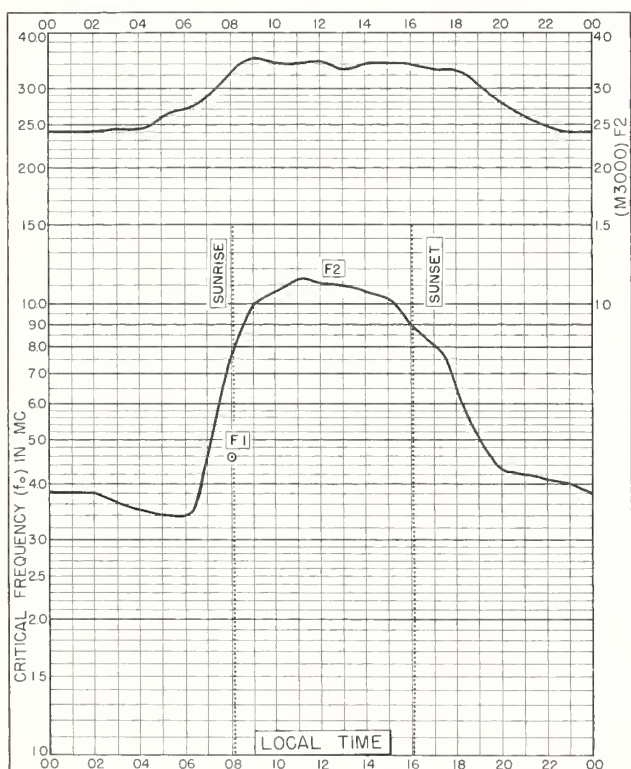
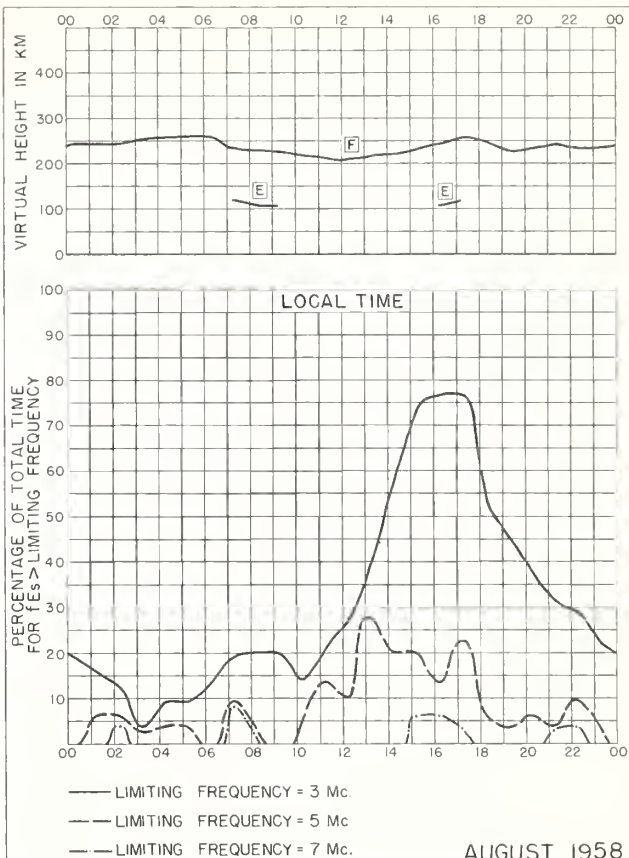
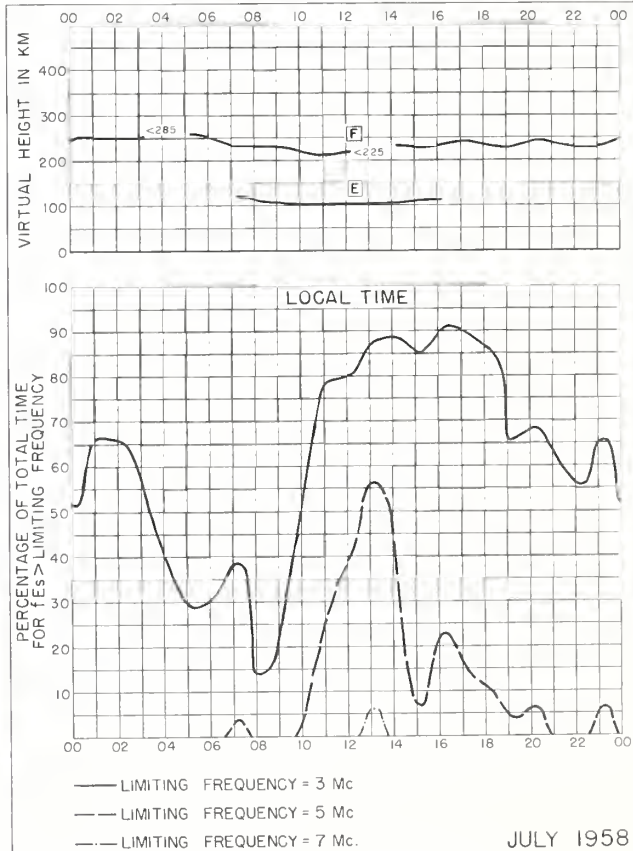
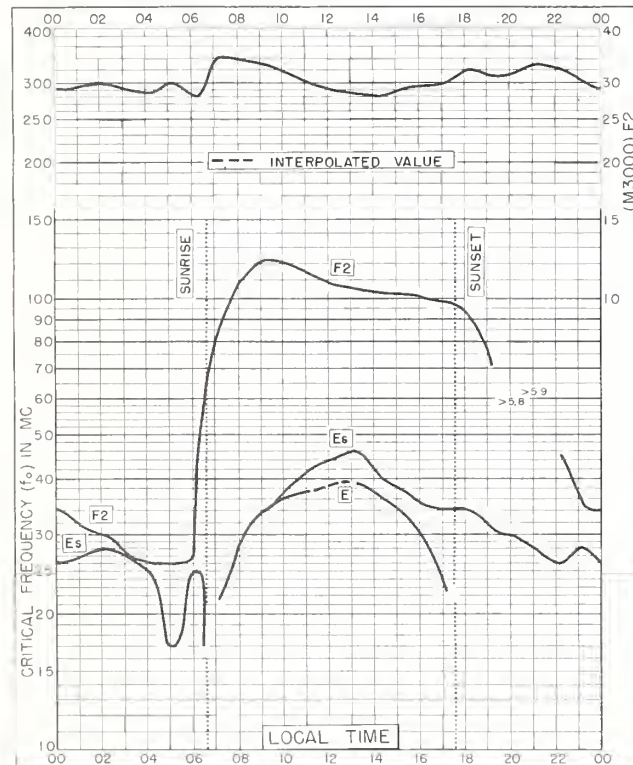
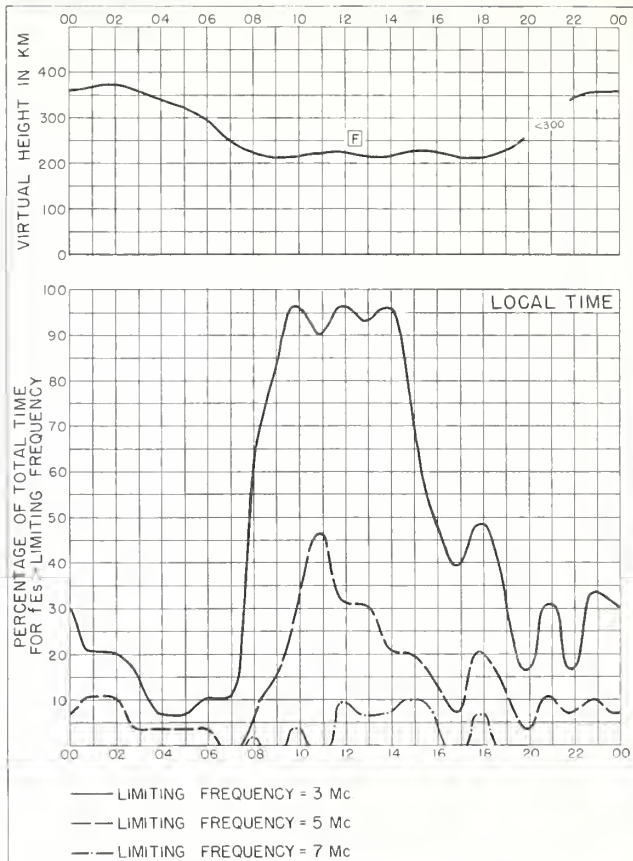
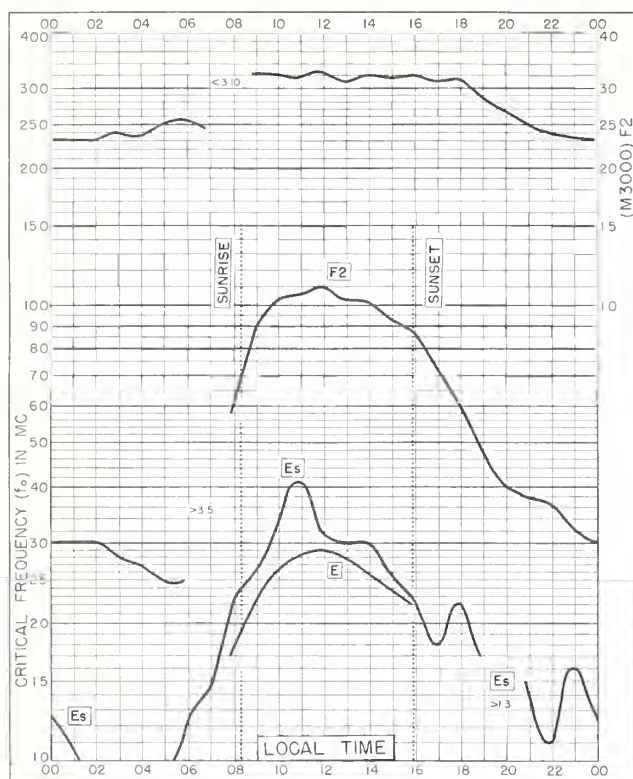


Fig. 128. TANANARIVE, MADAGASCAR

AUGUST 1958

NBS 490





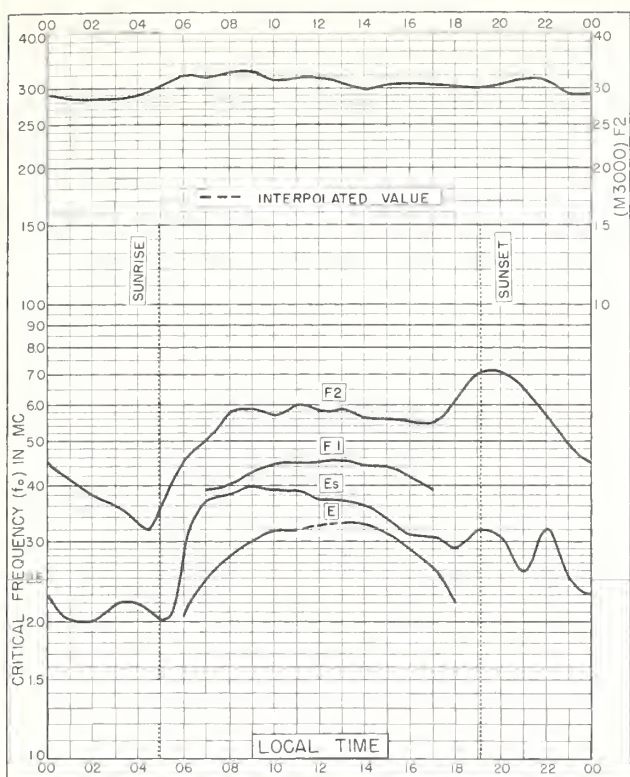


Fig. 137. FREIBURG, GERMANY
48.1°N, 7.8°E

AUGUST 1955

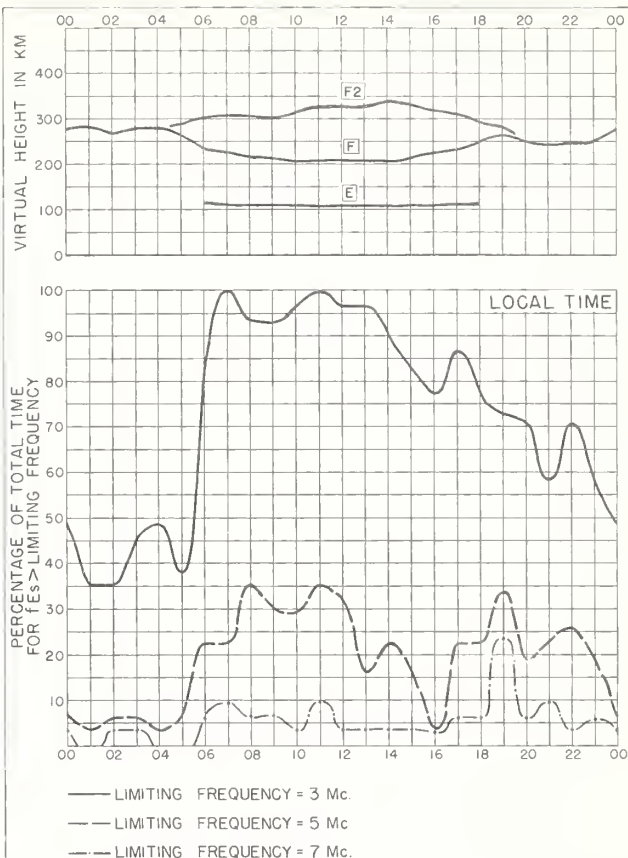


Fig. 138. FREIBURG, GERMANY

AUGUST 1955

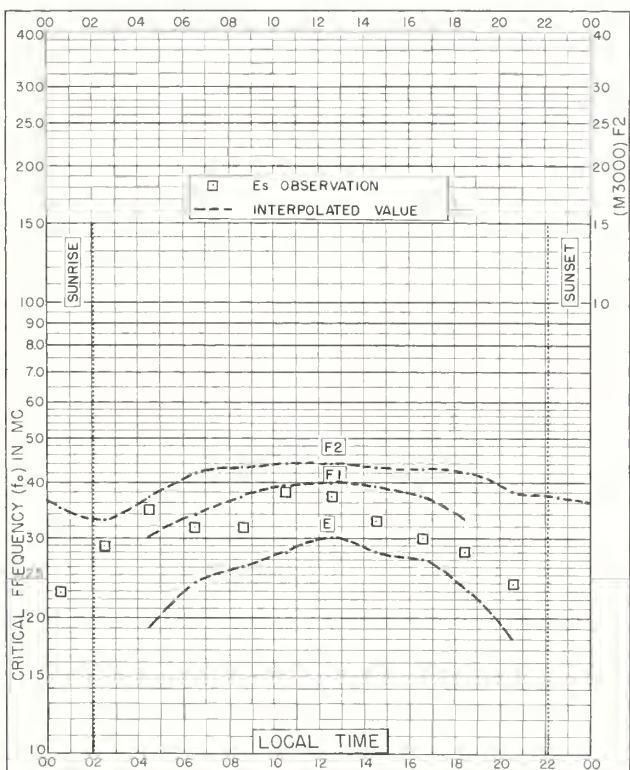


Fig. 139. LULEA, SWEDEN
65.6°N, 22.1°E

JULY 1954

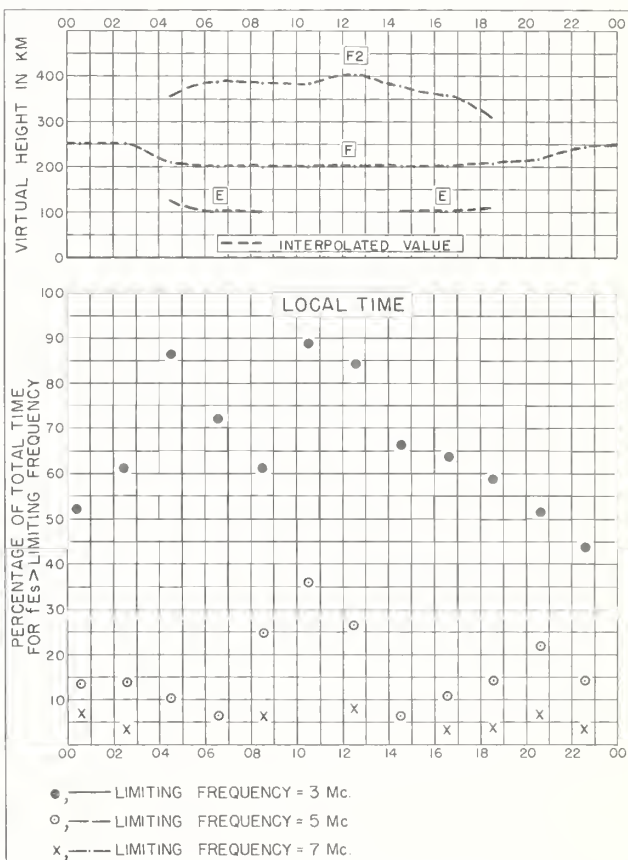


Fig. 140. LULEA, SWEDEN

JULY 1954

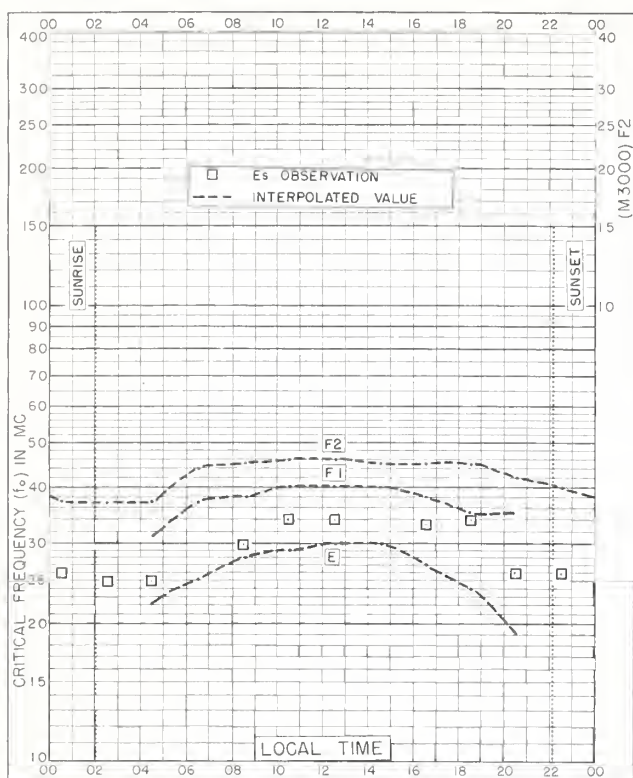


Fig. 141. LULEA, SWEDEN
65.6°N, 22.1°E

JULY 1953

NBS 503

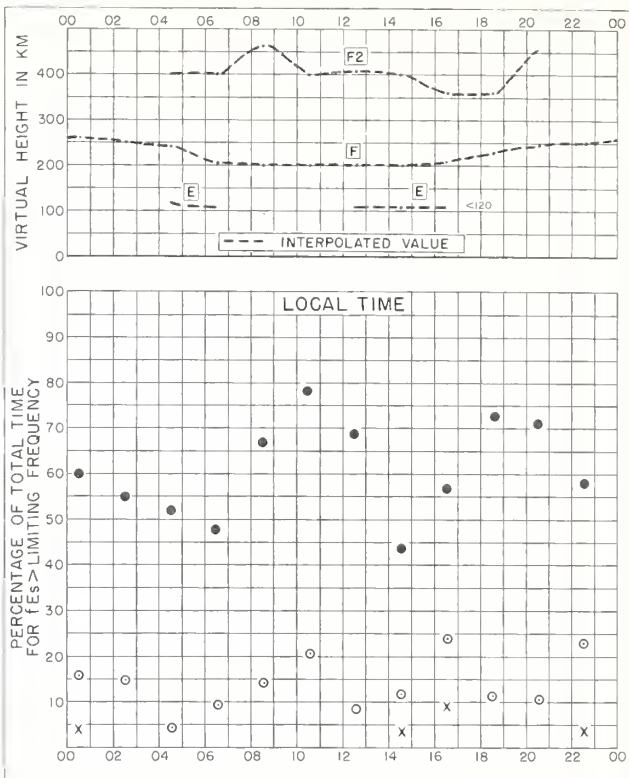


Fig. 142. LULEA, SWEDEN

JULY 1953

NBS 490

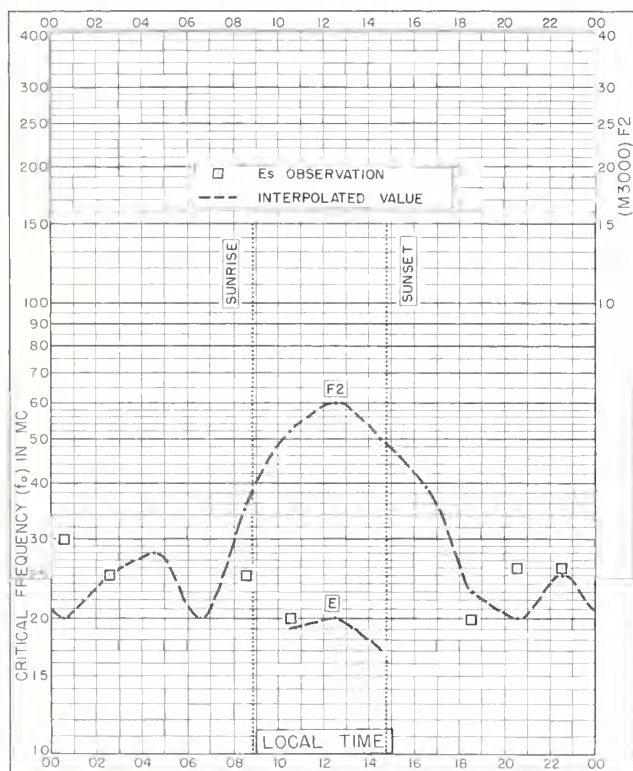


Fig. 143. LULEA, SWEDEN
65.6°N, 22.1°E

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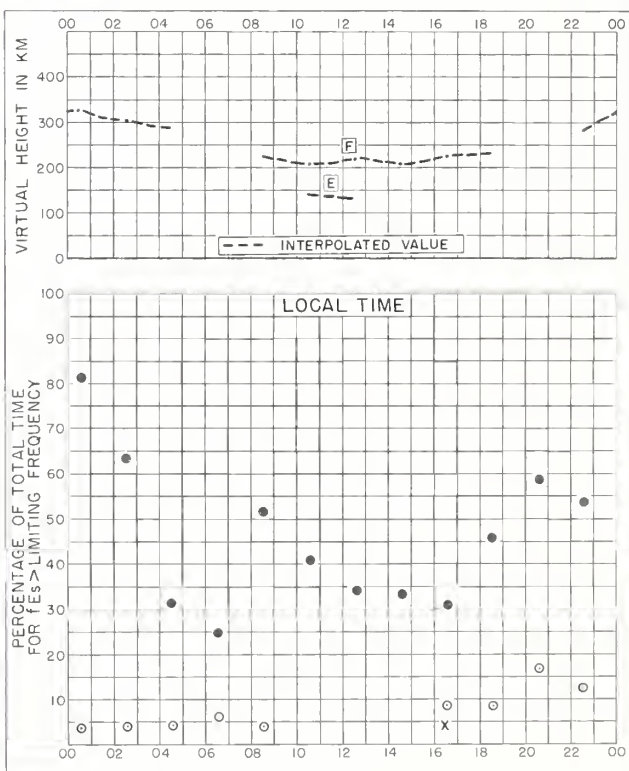


Fig. 144. LULEA, SWEDEN

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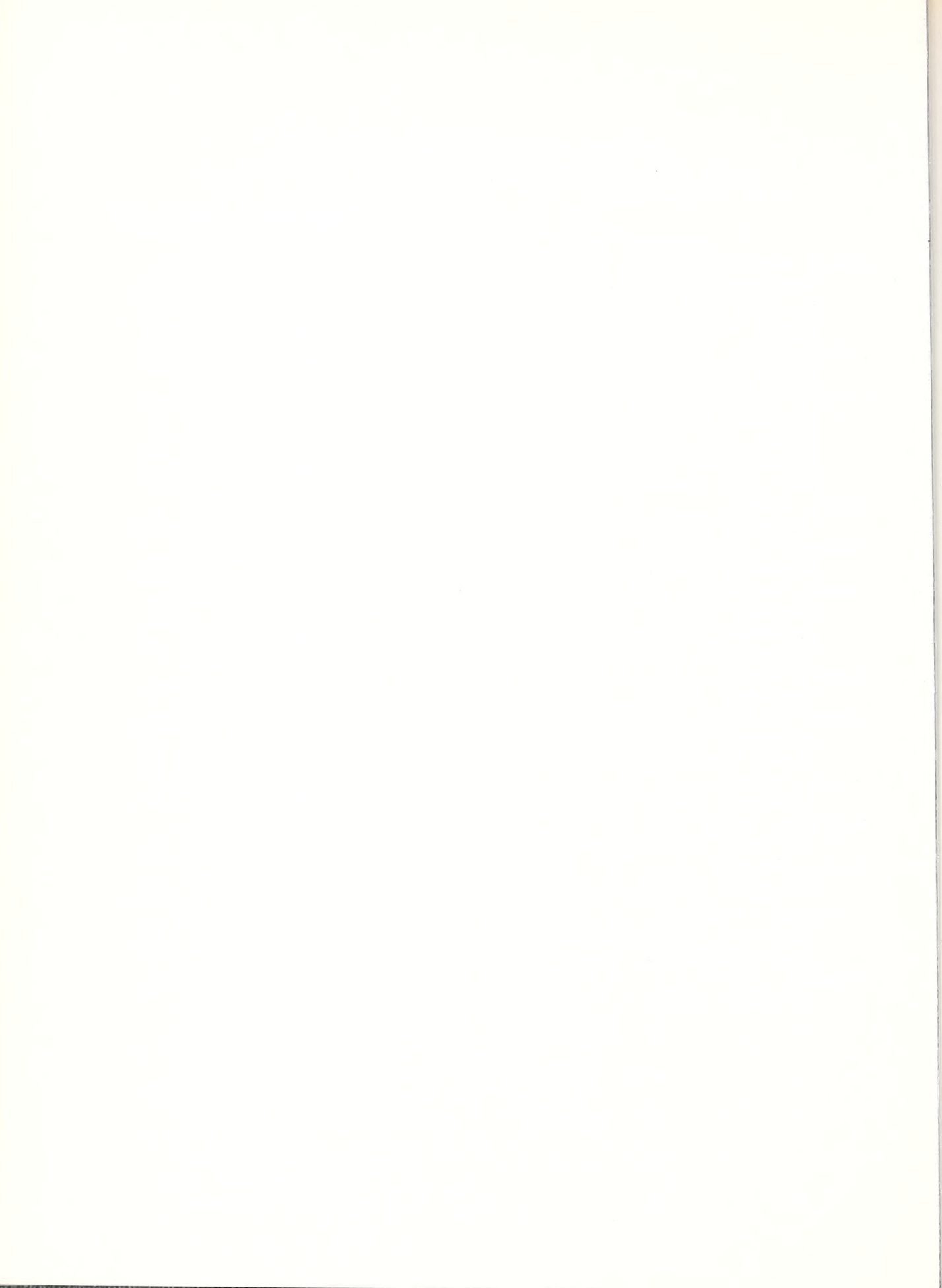
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Catalog of Data:

A catalog of records and data on file at the U. S. IGY World Data Center A for Airglow and Ionosphere, Boulder Laboratories, National Bureau of Standards, which includes a fee schedule to cover the cost of supplying copies, is available upon request.

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